10 & 13 PATTERN SEWING MACHINES

SINGER

CAUTION !

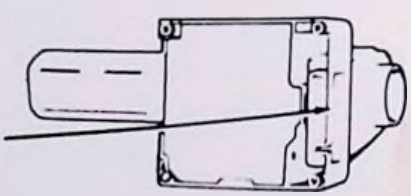
POLARIZED PLUG FOR NORTH AMERICAN TERRITORIES

To reduce the risk of electric shock, this appliance has a polarized plug (one blade is wider than the other). This plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install the proper outlet. Do not change the plug in any way.

Dear Customer:

We recommend that for future reference you record the Serial Number of your Sewing Machine in the space provided.

Refer to illustration at right for location of Serial Number on your machine.



Model No. _____ Serial No. _____

Correct foot controller for this model is model no.: 988667-001 (for North American Territories)

To ensure that you are always provided with the most modern sewing capabilities, the manufacturer reserves the right to change the appearance, design or accessories of this sewing machine when considered necessary.

Table of Contents

1. **Getting to Know Your Machine** 2
   - Principal Parts 2
   - Accessories 4
   - Important Safeguards 5

2. **Getting Ready to Sew** 7
   - Connecting the Machine/Running the Machine 7
   - Choosing and Changing Needles 8
   - Free Arm Sewing 8
   - Changing the Presser Foot 9
   - Replacing Presser Foot with Shank 10
   - Attaching Darning and Embroidery Foot 10
   - Attaching Feed Cover 10
   - Threading the Machine 11
   - Winding a Bobbin 12
   - Inserting a Wound Bobbin 13
   - Raising the Bobbin Thread 14
   - Selecting a Pattern 15

3. **Straight Stitching** 15
   - Preparation 15
   - Sewing a Seam 17
   - Darning 19
   - Free Motion Embroidery 19
   - Inserting a Zipper 20

4. **Special Stitches** 21
   - Preparation 22
   - Zig-Zag Stitch 23
   - Zig-Zag Blindstitch 23
   - Multi-Stitch Zig-Zag 24
   - "M" Stitch 25
   - Crescent Stitch 25
   - Stretch Overedge Stitch 26
   - Fagoting Stitch 26
   - Ric Rac/Straight Stretch Stitch 27
   - Honeycomb Stitch 27
   - Slant Overedge Stitch 28
   - Arrow Stitch 28

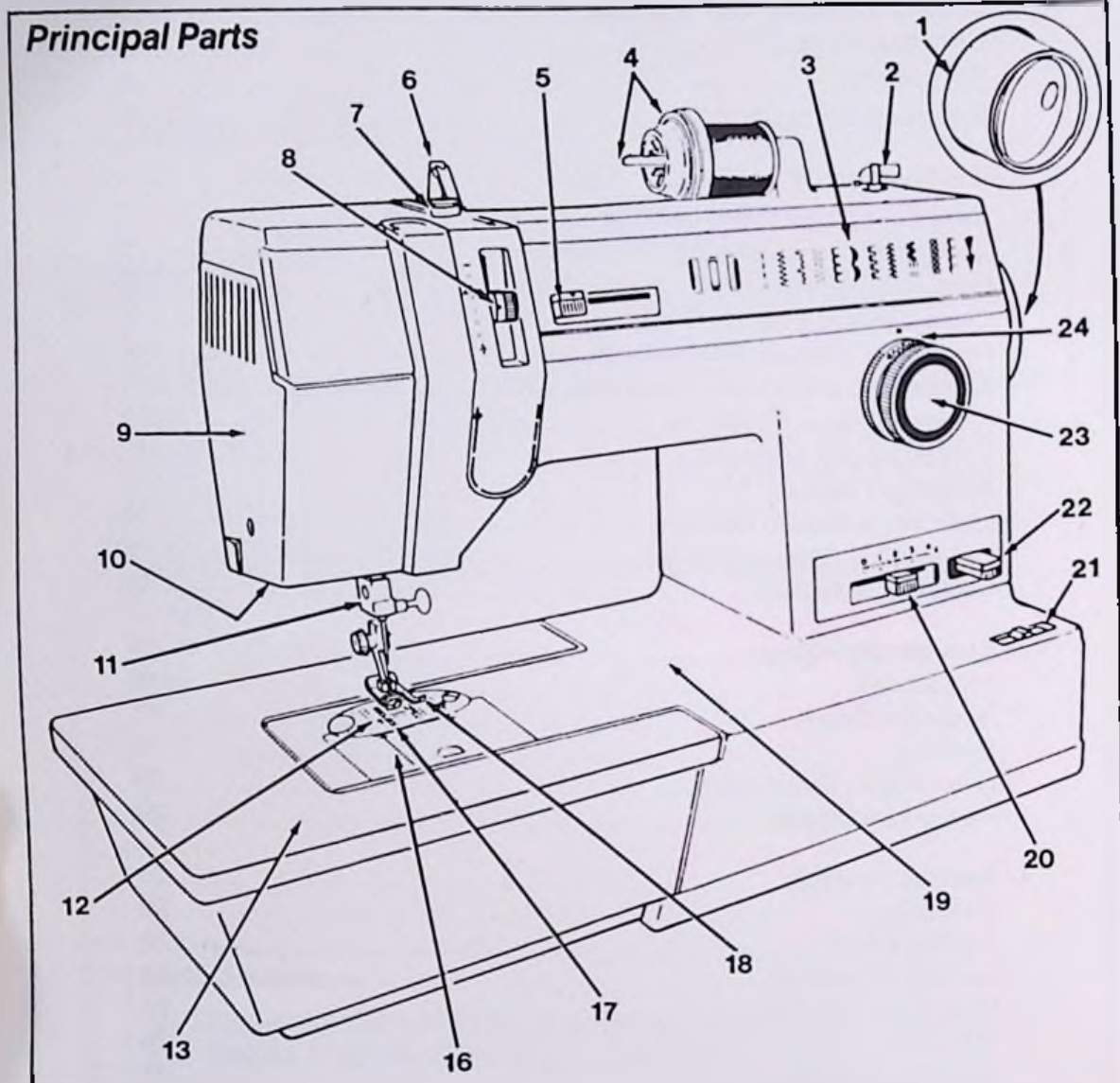
5. **Four-Step Buttonholing** 29

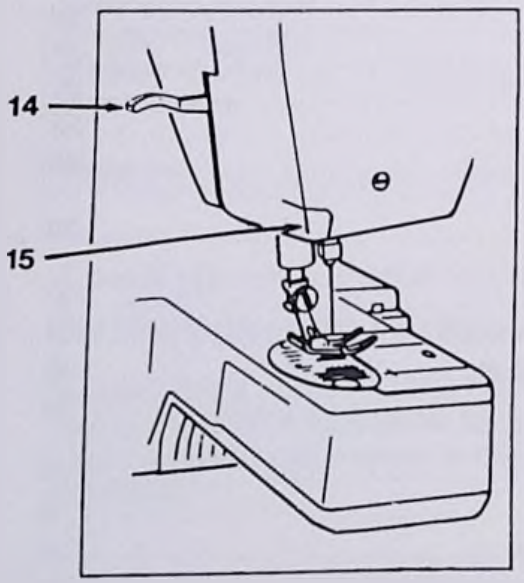
6. **Caring for Your Machine** 31
   - Removing and Replacing Bobbin Case 31
   - Removing and Replacing Light Bulb 32
   - Cleaning the Machine 33

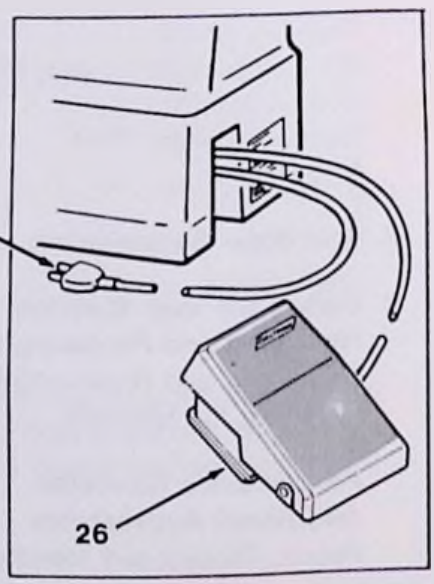
Performance Checklist 34
Additional Accessories 35
Fabric, Thread and Needle Table 36
Index 37

SECTION 1 GETTING TO KNOW YOUR MACHINE

Principal Parts





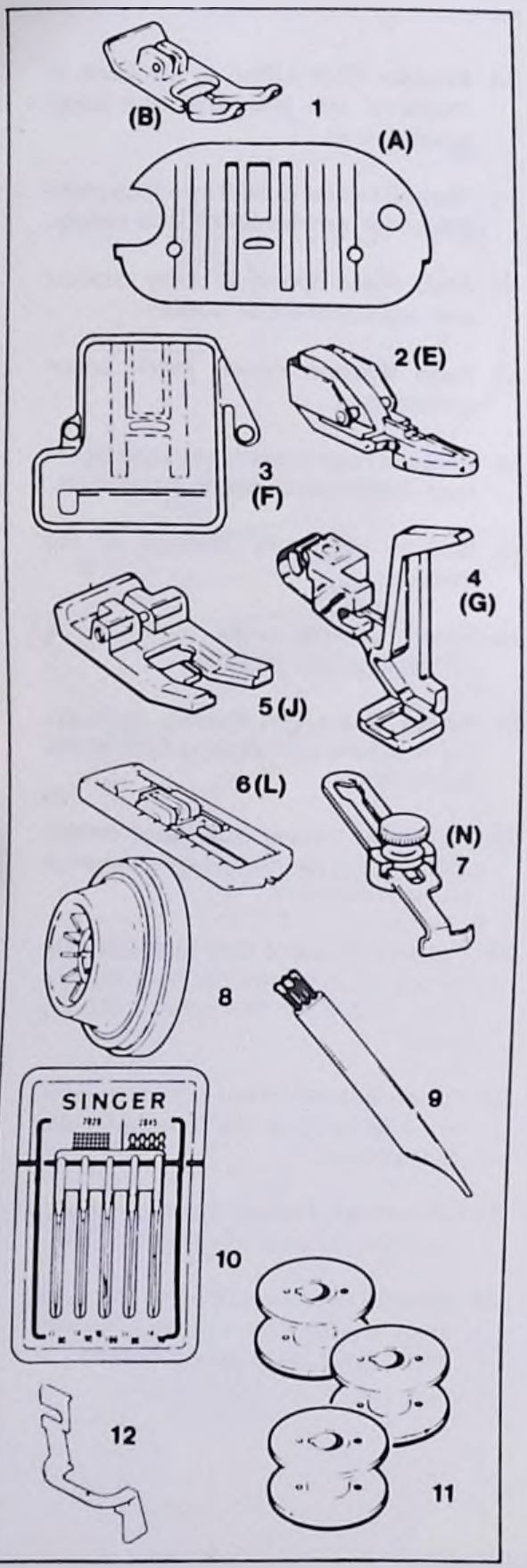


Principal Parts

1. **Hand Wheel** provides a means for raising or lowering the needle.
2. **Bobbin Winder** lets you fill the bobbin with thread quickly and easily.
3. **Pattern Display Panel** shows a variety of patterns available for your sewing needs.
4. **Friction-Free Spool Pin and Cap** hold the top thread supply and allow it to unwind smoothly as the spool does not turn.
5. **Stitch Width Lever** controls the width of patterns and sets the needle for straight stitching.
6. **Snap-In Thread Guide** helps to insure a smooth flow of thread from the spool to the tension.
7. **Bobbin Winder Tension Disc** provides thread tension for bobbin winding.
8. **Auto Needle Thread Tension Lever** controls top thread tension.
9. **Face Plate** is a removable cover protecting movable parts and sewing light.
10. **Sewing Light** illuminates sewing area.
11. **One-Way Needle Clamp** holds needle in machine and prevents incorrect insertion.
12. **Needle Plate** supports the fabric during sewing
13. **Removable Extension Table** lets you change the machine bed from flat to free arm.
14. **Presser Foot Lifter,** at the back of machine, lets you raise and lower presser foot.
15. **Thread Cutter is built into face plate cover for convenience and safety.**
16. **Slide Plate** opens for easy removal and replacement of bobbin.
17. **Feed System** moves fabric under presser foot.
18. **Presser Foot** holds fabric against the feed system and snaps on and off.
19. **Bed** is the work surface of the machine.
20. **Stitch Length Lever** allows for a variety of stitch lengths.
21. **Power and Light Switch** turns on the machine and sewing light at the same time.
22. **Reverse Lever** provides either momentary or continuous reverse fabric movement.
23. **Pattern Selector Dial** turns directly to any of the patterns, plus buttonhole, shown on the pattern display panel.
24. **Stitch Balance Ring** adjusts appearance of Special Stitch patterns and buttonholes.
25. **Electrical Power Cord** connects machine to your electrical outlet.
26. **Speed Controller,** designed for safety and convenience, regulates the electronic solid state speed control.

ACCESSORIES

The accessories for your machine are designed to simplify many of your sewing projects



1. **General Purpose Needle Plate (A),** and **Presser Foot (B)**, are standard on the machine. Used for straight and zig-zag sewing.

2. **Zipper Foot (E),** for inserting zippers.

3. **Feed Cover (F),** used for button sewing, free motion work and darning. It keeps the feed from moving fabric.

4. **Darning and Embroidery Foot (G),** is recommended for free motion work, such as embroidery, monogramming and decorative designs. (Not included with 10 pattern sewing machine. See page 35).

5. **Special Purpose Presser Foot (J),** used for decorative and zig-zag stitching.

6. **Buttonhole Presser Foot (L),** used to make four-step buttonholes.

7. **Seam Guide (N),** helps keep seam allowances even. (Not included with 10 pattern sewing machine. See page 35).

8. **Spool Holder** for medium and large thread spools.

9. **Lint Brush,** for cleaning the machine.

10. **Needle Pack,** includes an assortment for sewing various types of fabrics.

11. **Bobbins,** transparent for easy viewing.

12. **Blindstitch Hem Guide,** is used to position the hem for blindstitch hemming.

IMPORTANT SAFETY INSTRUCTIONS

When using this machine, basic safety precautions should always be followed including the following:
Read all instructions before using this machine.

DANGER.

To reduce the risk of electric shock:

- The machine should never be left unattended when plugged in. Always unplug the machine from the electric outlet immediately after using and before cleaning.
- Always unplug before changing light bulb. Replace bulb with the same type rated 15 watts. Be sure to replace the face plate which covers the light blub before operating the machine.

WARNING.

To reduce the risk of burns, fire, electric shock or injury to persons:

- Be sure that the electrical voltage of the socket outlet (wall receptacle) is the same as the rated voltage of the motor.
- Use this machine only for its intended use as described in this Operator's Guioe. Use only attachments recommended by the manufacturer as contained in the Operator's Guide.
- To disconnect, turn all controls to the off ("0") position, then remove plug from outlet.
- Disconnect the power-line plug from the socket outlet or switch the machine off when making any adjustments in the needle area, such as threading needle, changing needle, changing needle plate or changing presser foot, etc.
- Always unplug the machine from the electrical outlet when removing covers, lubricating, or when making any other user servicing adjustments mentioned in the Operator's Guide.
- Do not attempt to adjust the motor belt. Contact your nearest Service Center should any adjustment be required.
- Do not unplug by pulling on cord. To unplug, grasp the plug, not the cord.
- Handle the foot controller with care and avoid dropping it on the floor. Be sure not to place anything on top of it.
- Always use the proper needle plate. The wrong plate can cause the needle to break.
- Do not use bent needles.
- When sewing, keep fingers away from all moving parts. Special care is required around the sewing machine needle.
- Do not pull or push fabric while stitching. This may deflect the needle causing it to break.
- Before removing the bobbin case, remove plug from the socket outlet.

- For double insulated machines, when servicing, use only identical Singer replacement parts. See instructions for Servicing of Double-Insulated Appliances.
- Never operate the machine if it has a damaged cord or plug, if it is not working properly, if it has been dropped or damaged, or dropped into water. Return the machine to the nearest authorized dealer or Service Center for examination, repair, electrical, or mechanical adjustment.
- Never operate the machine with any air openings blocked. Keep ventilation openings of the machine and foot controller free from the accumulation of lint, dust, and loose cloth.
- Never drop or insert any object into any opening.
- Do not use outdoors.
- Do not operate where aerosol (spray) products are being used or where oxygen is being administered.
- Do not allow to be used as a toy. Close attention is necessary when the machine is used by or near children.
- SERVICING OF DOUBLE-INSULATED PRODUCTS. In a double-insulated product, two systems of insulation are provided instead of grounding. No grounding means is provided on a double-insulated product, nor should a means for grounding be added to the product. Servicing of a double-insulated product requires extreme care and knowledge of the system, and should be done only by qualified service personnel. Replacement parts for a double-insulated product must be identical to those parts in the product. A double-insulated product is marked with the words "DOUBLE-INSULATION" or "DOUBLE INSULATED".

SAVE THESE INSTRUCTIONS

Servicing should be performed by an authorized service representative.

This product is intended for household use.

FOR EUROPEAN AND SIMILAR TERRITORIES:

This product is suppressed for radio and television interference with the International Electrotechnical Commission requirements of the CISPR.

Machines for Great Britain and some other countries having similar wiring standards are shipped from the factory with a plug for connection to the mains. The wires in this mains lead are coloured in accordance with the following code:

Blue: neutral (N) Brown: live (L)

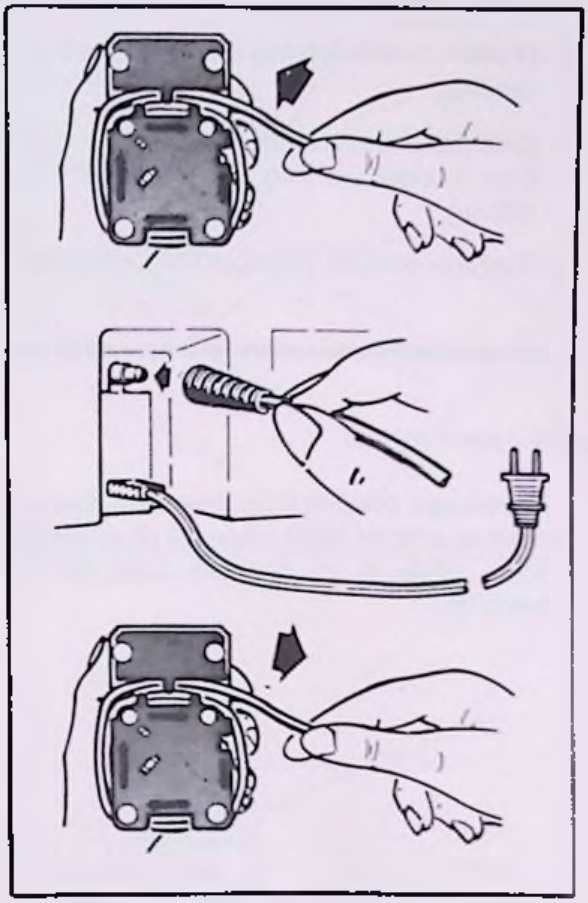
As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black. The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red. If a 13 Amp. (BS 1363) plug is used, a 3 Amp. fuse must be fitted, or if any other type of plug is used, a 5 Amp. fuse must be fitted either in the plug or adaptor or at the distribution board. Neither cord is to be connected to the earth terminal of a three-pin plug.

SECTION 2 GETTING READY TO SEW

CONNECTING THE MACHINE

The solid state system assures constant speed as you maintain the same pressure on the controller when sewing through various fabric thicknesses.



Unwind the air control hose from foot operated speed controller.

Always be sure air hose is not blocked. Pressing on the controller, you should feel a slight air flow from the hose.

Plug this air hose onto the receptacle above power cord, at the right end of the machine.

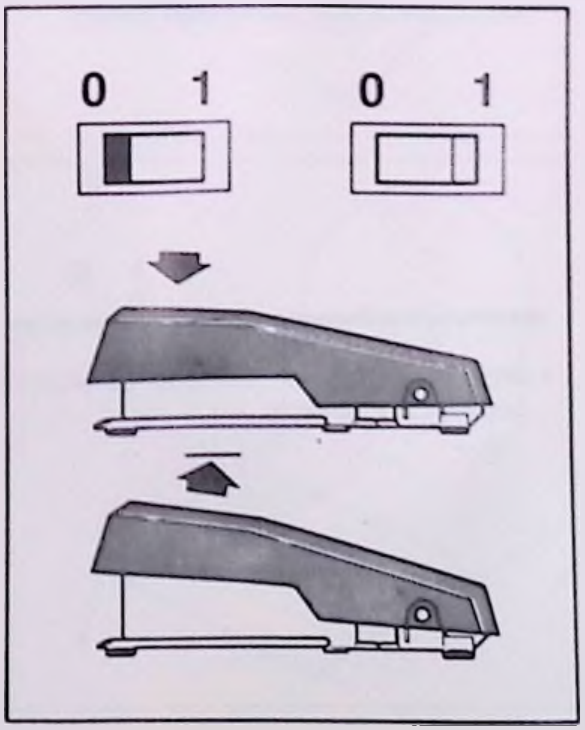
Then connect the electrical power cord plug to your electrical outlet.

NOTE: When not using the machine, rewind air hose around speed controller for storage, as shown.

Do not operate machine without material under the presser foot as this may damage the feed and the foot.

RUNNING THE MACHINE

The machine and the sewing light are turned on and off by the same power switch.



ROCKER SWITCH

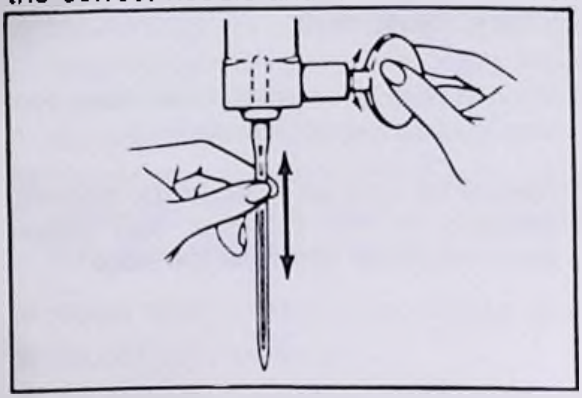
To turn on machine and sewing light, press power switch down at right side. To turn off machine and light, press power switch down at left side.

To run the machine, press the speed controller. The harder you press, the faster the machine will sew.

To stop the machine from sewing, remove pressure from speed controller.

CHOOSING AND CHANGING NEEDLES

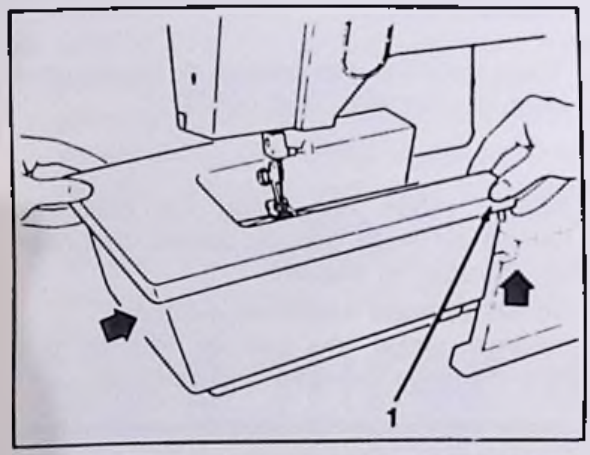
IMPORTANT: For best sewing results, use only Singer needles.
Check the needle package, and the Fabric, Thread and Needle Table on page 36, for the correct needle and fabric combination.



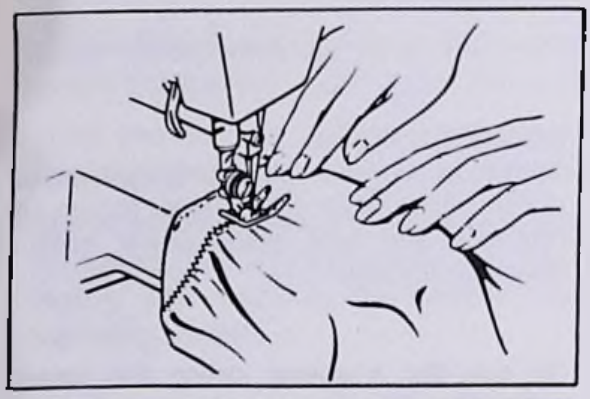
- Raise needle to its highest position.
- Loosen needle clamp screw and remove needle.
- With flat side of needle to the back, insert new needle up into clamp as far as it will go.
- Tighten needle clamp screw securely.

FREE ARM SEWING

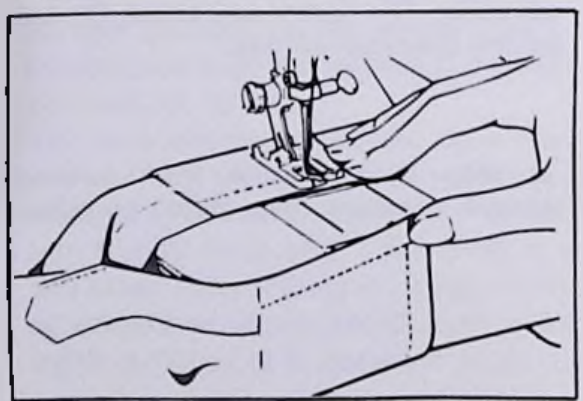
Free arm sewing makes it easier to sew hard-to-reach areas.



To change machine for free arm sewing, push in and lift right edge (1) of extension table, slide it to the left and off the machine.



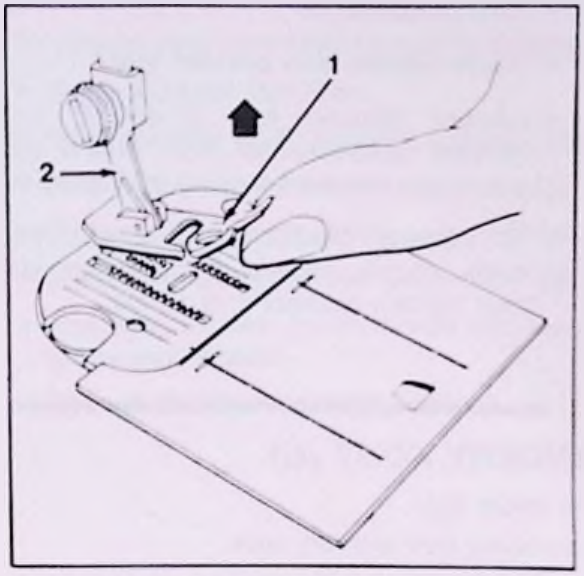
- Topstitch edges on sleeves, or finish waistbands and pants legs easily.



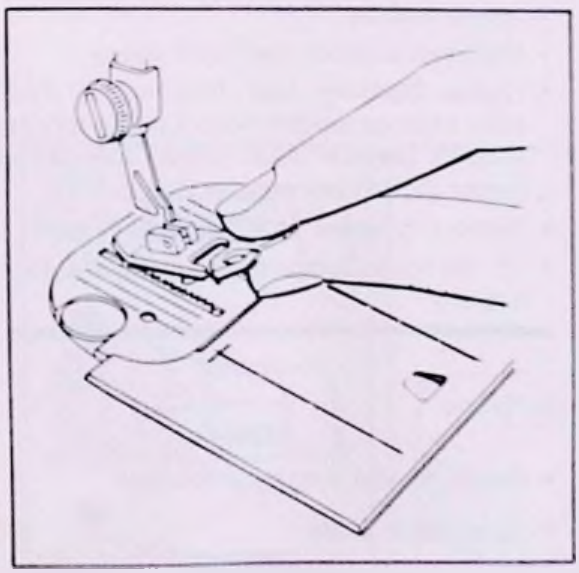
- Sew buttonholes without stretching cuffs or neckbands.

CHANGING THE PRESSER FOOT (B) (E) (J) (L)

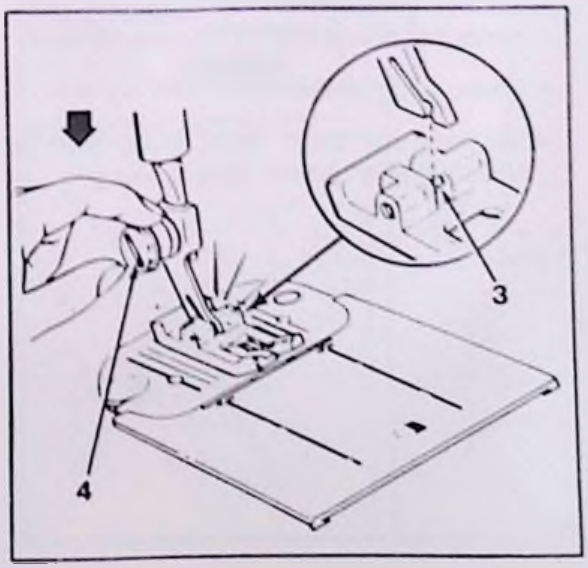
Your machine comes with the General Purpose Presser Foot already attached. You can easily change to any one of the other presser feet which snap onto a common shank by following the directions below.



- Raise needle to its highest position by turning hand wheel toward you.
- Raise presser foot using presser foot lifter in back of machine.
- Push toe of presser foot **(1)** up, until it snaps off the shank **(2)**



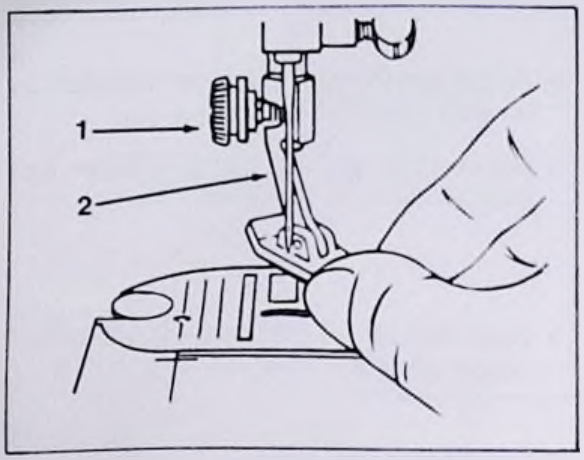
- Take foot off machine.



- Place new foot under center of shank.
- Lower presser foot lifter, fitting shank over presser foot pin **(3)**.
- Don't turn screw. Instead, **push** presser foot screw **(4) down** firmly until foot snaps into place.

REPLACING PRESSER FOOT WITH SHANK

Presser feet with built-in shanks can be replaced as follows

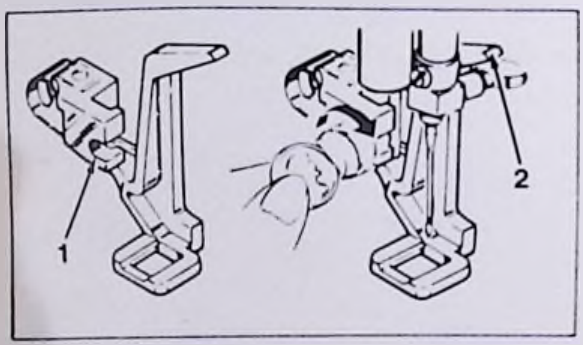


- Turn machine off
- Raise needle and presser foot
- Loosen presser foot screw (1) and remove presser foot with shank (2), guiding it toward you and to the right.
- To replace presser foot with shank, hook shank around the presser bar and tighten presser foot screw.

ATTACHING DARNING AND EMBROIDERY FOOT (G)

(Not included on 10 stitch sewing machine. See page 35).

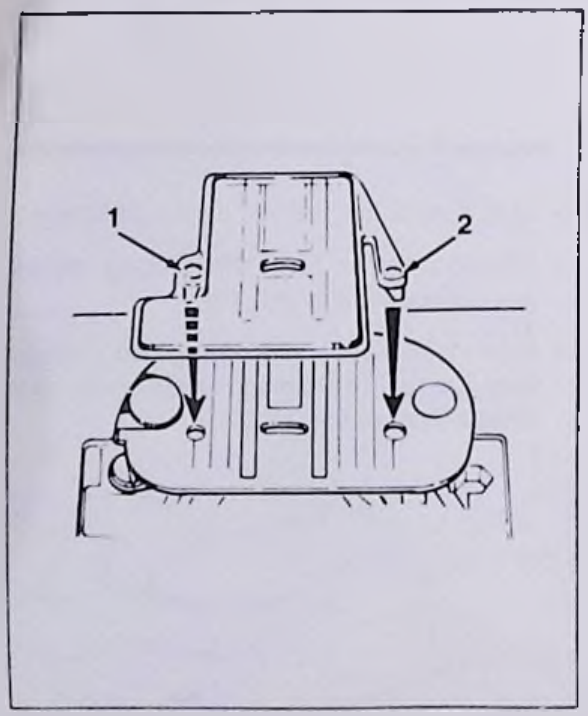
This foot permits better control of fabric when doing free motion work



- Raise needle
- Remove presser foot with shank
- Guide Darning and Embroidery Foot from back of needle, with holding fork (1) around presser foot screw, and lifting finger (2) above needle clamp
- Tighten presser foot screw with coin
- To remove, loosen screw; guide foot back.

ATTACHING FEED COVER (F)

The feed cover keeps the feed from moving the fabric.



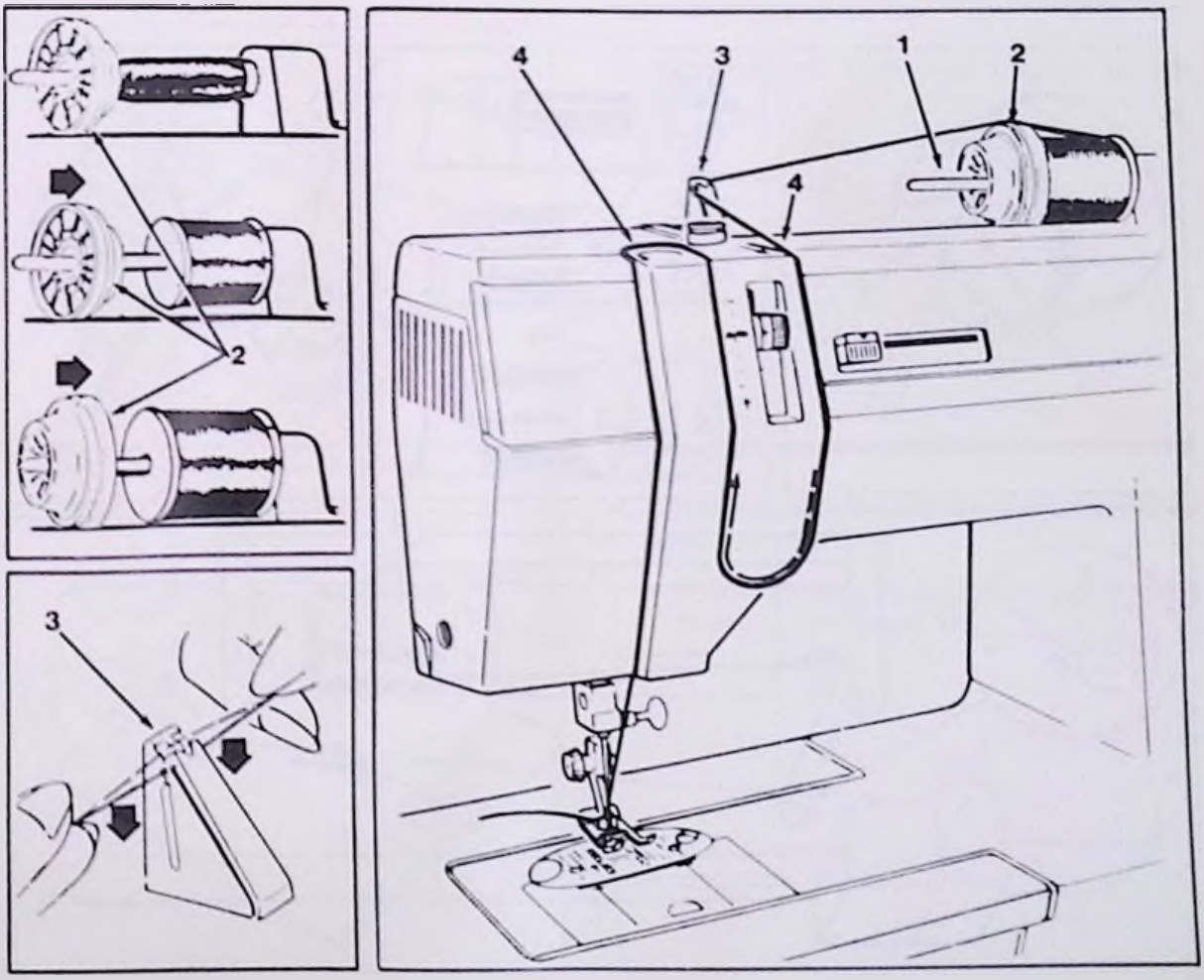
- Raise needle and presser foot
- Open slide plate
- Slide feed cover on top of needle plate, pressing tabs (1) and (2) into holes
- Close slide plate
- To remove, open slide plate and lift front edge of cover, pull it away

THREADING THE MACHINE

Your sewing machine is easily threaded. Tension discs, guides and take-up lever have been designed as internal parts, eliminating many extra threading steps. The clear threading path helps you avoid threading errors.

To thread your machine correctly, simply follow the steps below:

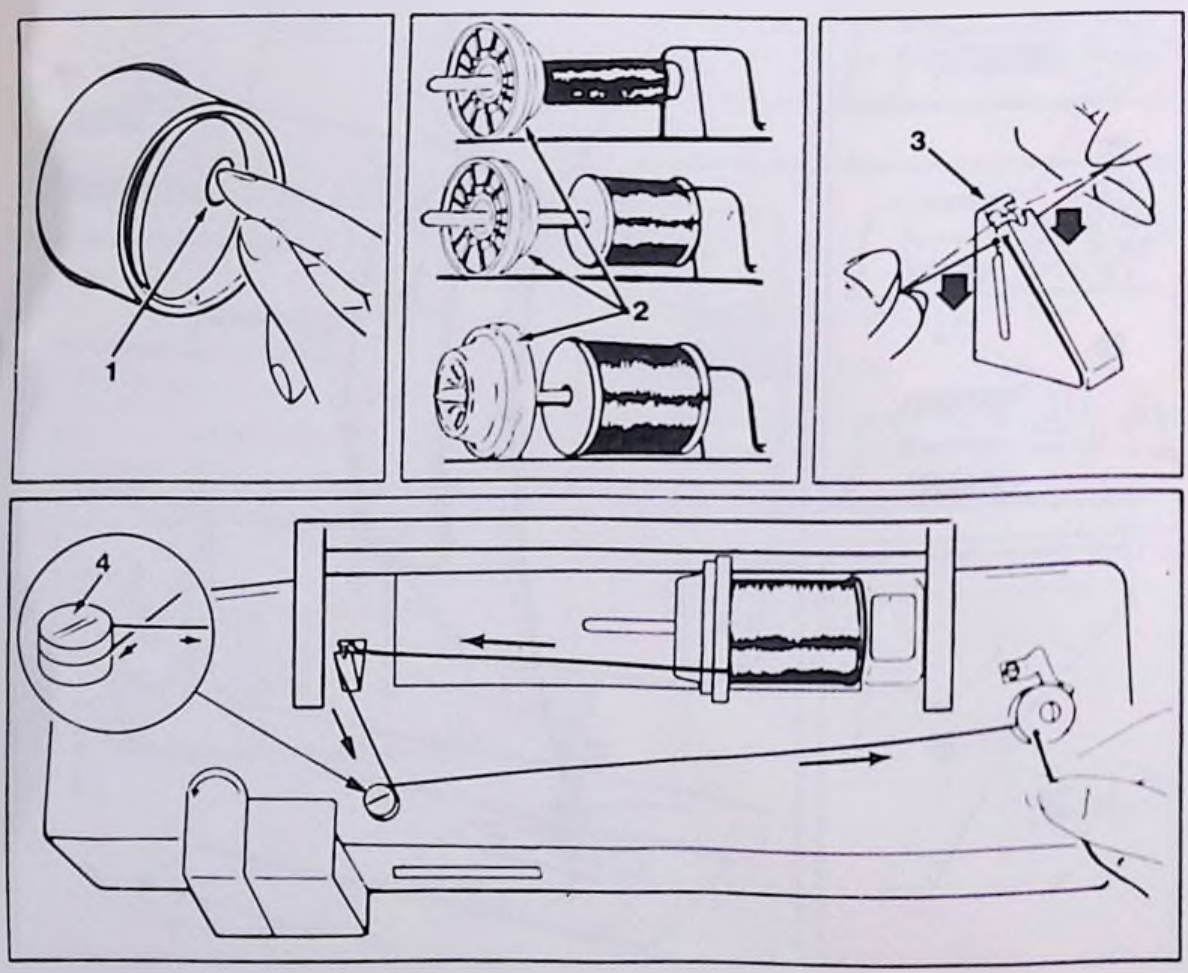
- Raise presser foot lifter.
- Raise needle to its highest position by turning hand wheel toward you.
- Place spool of thread on spool pin **(1)**.
- Slide spool cap **(2)** firmly over the rim of the spool to prevent thread tangling.
- Snap thread into thread guide post **(3)**.
- Following arrows, guide thread into auto tension channel **(4)** down to needle and firmly pull thread.
- Thread needle from front to back.



WINDING A BOBBIN

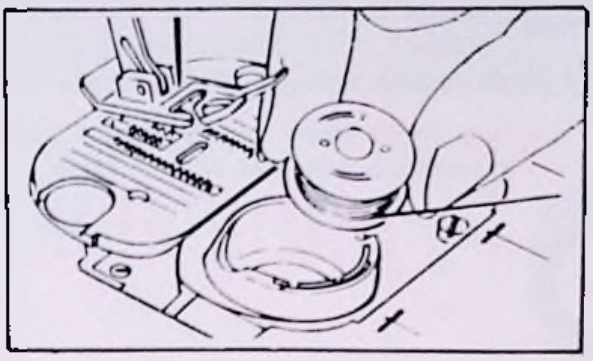
Winding a bobbin is quick and easy when you follow the directions below. Always wind the bobbin before threading the machine.

- Push in indent **(1)** on hand wheel disc. This will stop the needle from moving. This step is not necessary if your machine does not have hand wheel disc.
- Place spool of thread on spool pin.
- Slide spool cap **(2)** firmly over rim of spool to prevent thread tangling.
- Lead thread from spool and **snap** into thread guide post **(3)**.
- Wind thread **clockwise around front** of bobbin winder tension disc **(4)**.
- Pass thread end, from inside, through small hole in rim of bobbin.
- Place bobbin on spindle and push it to the right. On machines without hand wheel disc, this will automatically stop needle from moving.
- Holding thread end, step on speed controller to run machine until desired amount of thread is wound. (Winding stops automatically once bobbin is full.)
- Cut thread; push bobbin to the left and remove it from spindle.
- Trim thread end from top of bobbin.
- Return hand wheel disc to sewing position by pressing on side opposite indent.



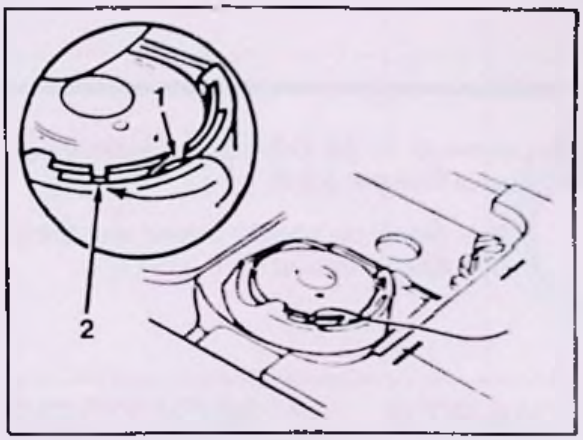
INSERTING A WOUND BOBBIN

To insert a bobbin, follow the instructions below.

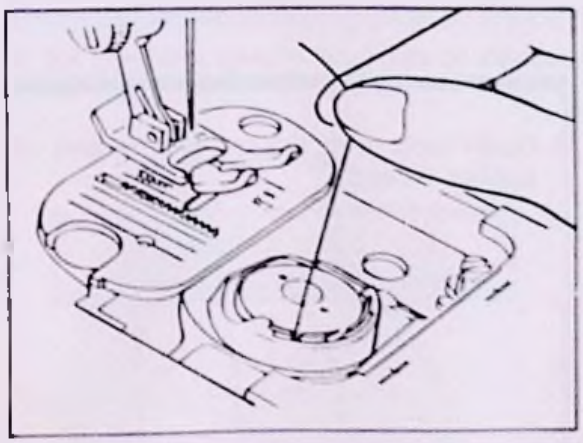


- Raise presser foot.
- Turn hand wheel toward you until needle is in its highest position.
- Open slide plate and remove bobbin.

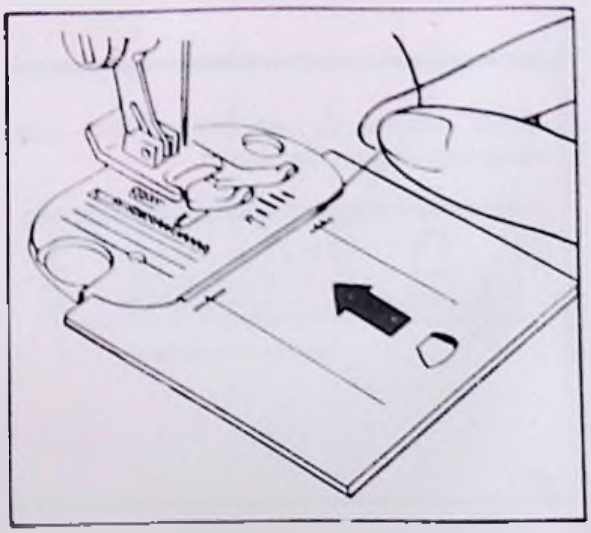
1. Pull 4" (10cm) of thread from replacement bobbin and insert bobbin into case, as shown.



2. Holding bobbin in place, guide thread into notch **(1)**, and then into notch **(2)**.



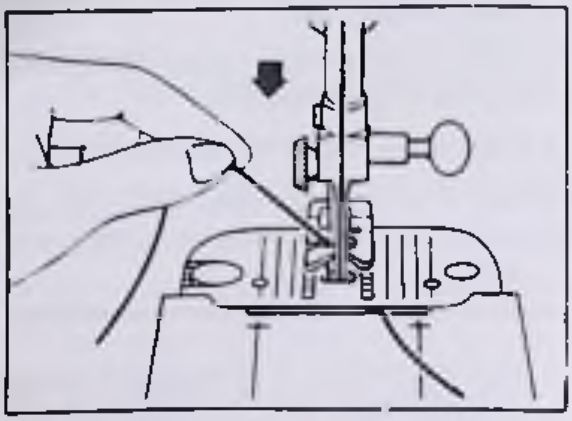
3. Draw several inches of thread across bobbin.



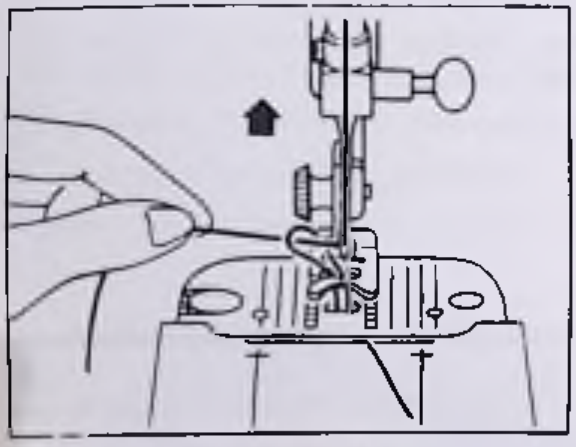
4. While holding thread on outside, close slide plate.
   - Follow directions for "Raising Bobbin Thread" on page **14**.

RAISING THE BOBBIN THREAD

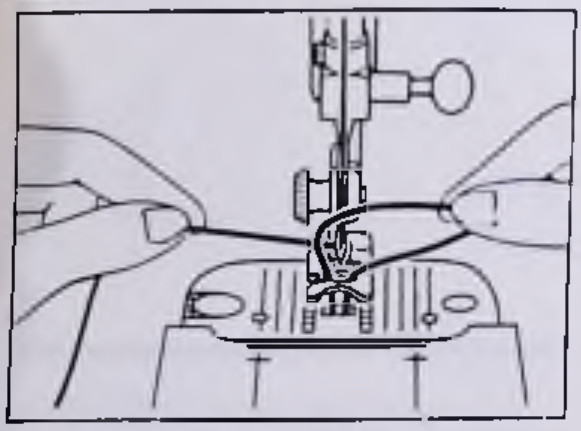
Once the needle has been threaded and the bobbin placed in the bobbin case, the bobbin thread must be brought up through the hole in the needle plate.



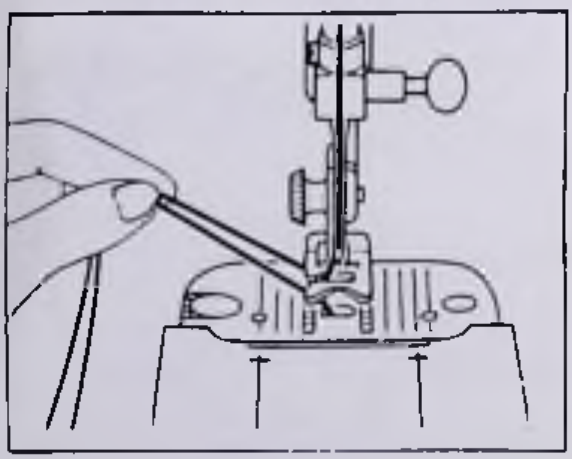
1. Hold needle thread with left hand.
   - Turn hand wheel slowly toward you, lowering needle into hole in plate.



2. Continue to do this until needle rises above needle plate.
   - Pull gently on needle thread and bring up bobbin thread in a loop.

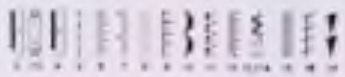
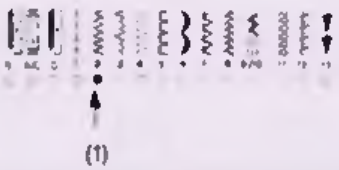


3. Open loop with fingers to find end of bobbin thread.



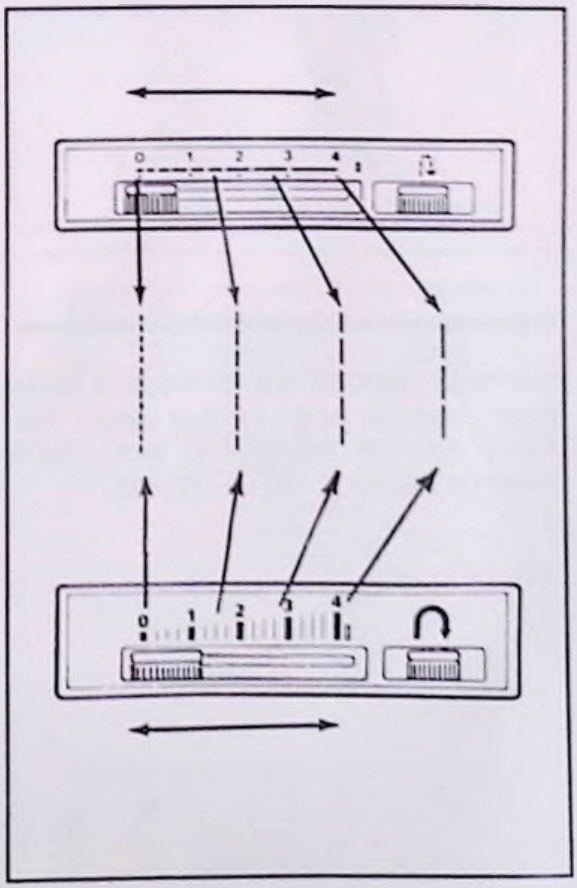
4. Draw needle thread through left side opening in presser foot.
   - Pull both threads to back of machine.

SELECTING A PATTERN

Control panel	Pattern	Pattern selector dial	Select a pattern	For example
	10 & 13		Turn the selector dial and align the number on the dial with the above dot.	To sew a zig-zag stitch align no.6 with the dot.
 (1)	10 & 13		Turn the selector dial until indicator appears under desired pattern.	To sew a zig-zag stitch, you would turn selector dial until the indicator appears as in (1).

SECTION 3 STRAIGHT STITCHING

Before beginning a sewing project, check the Fabric, Thread and Needle Table on page 36 for the best needle and thread combination for your fabric.



RECOMMENDED SETTINGS

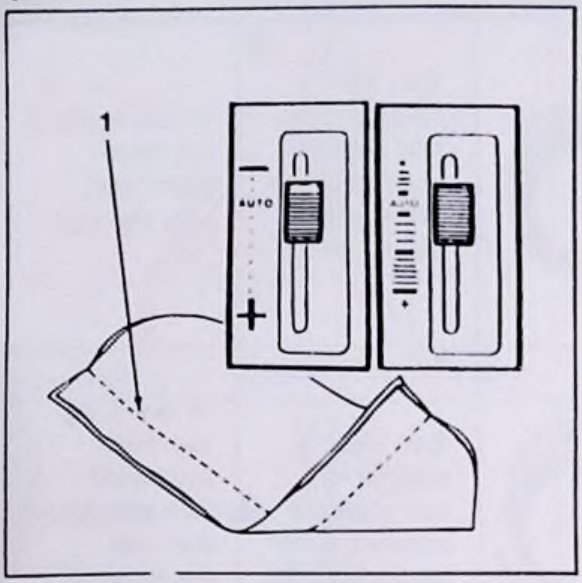
Stitch Selection:	Straight Stitch
Stitch Width:	
Stitch Length:	**1-1/2 to 4**
Foot:	General Purpose **(B)**
Needle Plate:	General Purpose **(A)**

ADJUSTING STITCH LENGTH

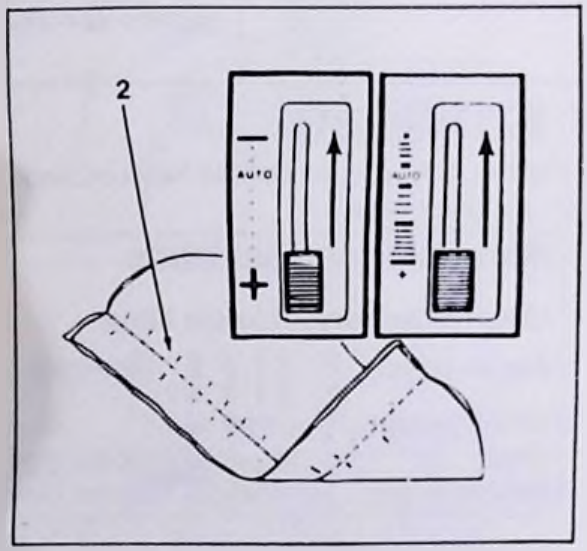
The stitch length indicator is numbered **0 - 4**. The lower numbers are shorter stitches. Shorter stitches are best for light-weight fabrics; longer ones for heavy fabrics. To adjust the length of your stitches, slide the stitch length lever to the left or right.

ADJUSTING THREAD TENSION

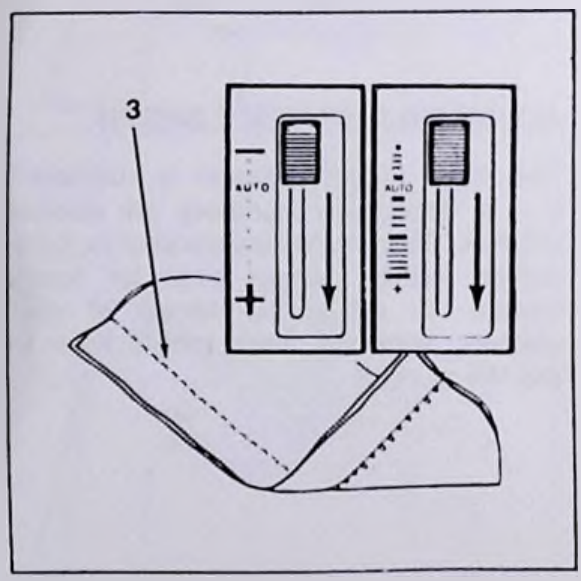
The thread tension on your sewing machine has been pre-set in the auto position to suit most sewing applications. This auto tension feature eliminates the need for you to adjust the tension lever for the majority of your sewing projects.



Proper tension will produce identical stitches on both the front and back of your fabric **(1)**.



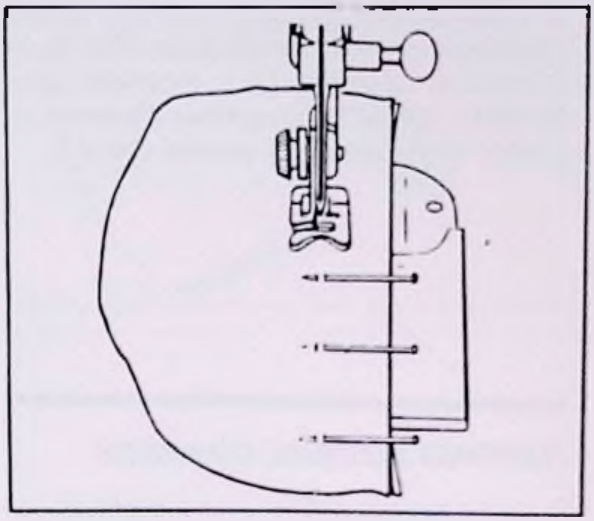
Too much tension will produce a tight stitch, causing a puckered seam **(2)**. Adjust tension by moving lever up toward a looser "–" setting.



Too little tension will produce a loose stitch, causing loops in your seams **(3)**. Adjust tension by moving lever down toward a tighter "+" setting.

SEWING A SEAM

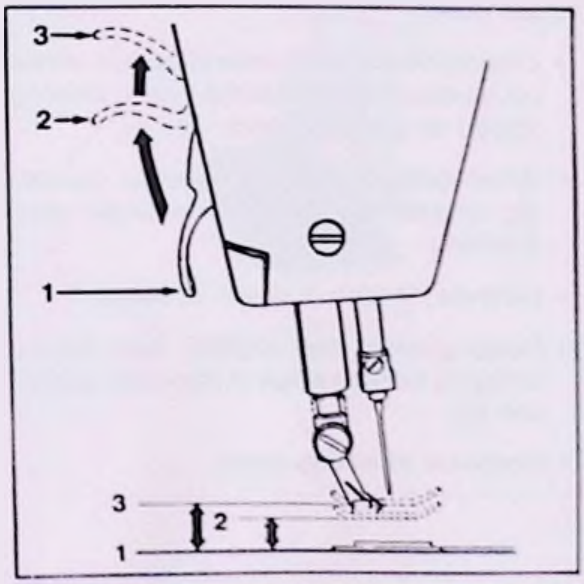
You can sew seams easily and accurately when you follow the suggestions below.



BASTING

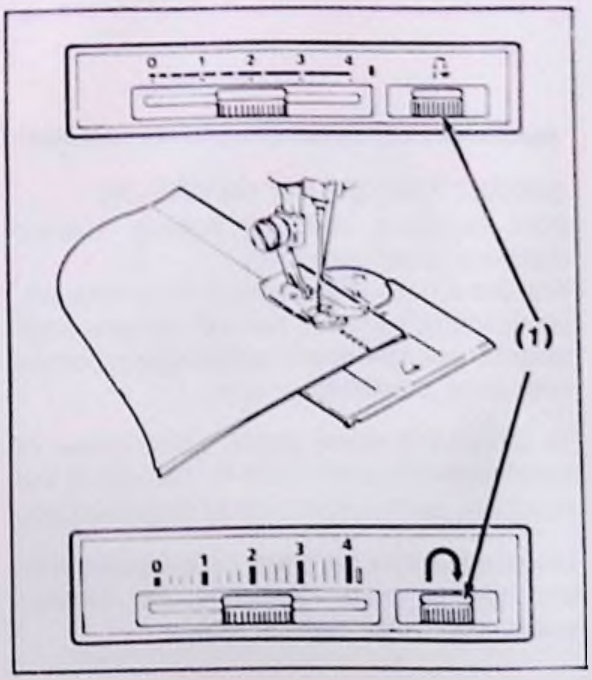
Pin basting and hand basting are easy ways to make temporary seams before machine sewing.

- To pin baste, insert pins at stitching line. NEVER place pins on the underside of fabric in contact with the feed. **Do not sew over pins; pull them out as you stitch.**
- To hand baste, make long, loose stitches that can be easily removed.



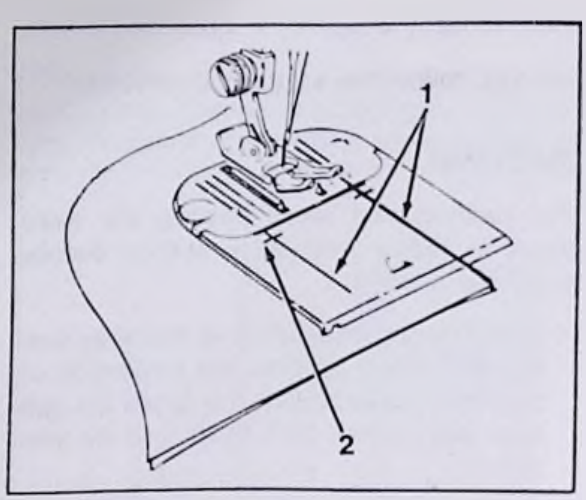
PLACING FABRIC UNDER PRESSER FOOT

- To place fabric under presser foot, raise presser foot lifter **(1)** to its "up" position **(2)**, where it locks in place.
- The lifter can be raised and held in the "extra high" position **(3)** for bulky fabrics.



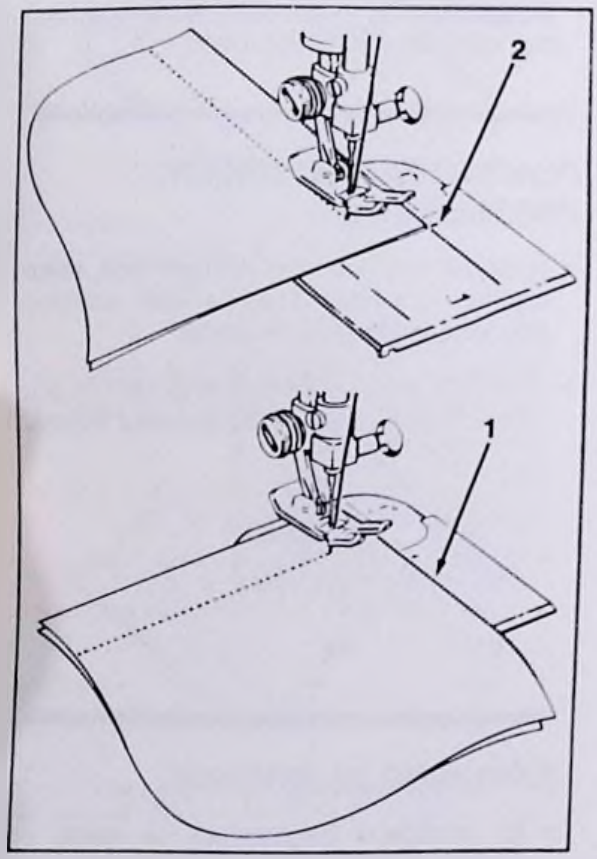
STITCHING IN REVERSE

- To reinforce beginnings or ends of seams, push in reverse lever **(1)**. Machine will straight stitch in reverse for as long as you hold the lever in.
- For continuous reverse stitching, push lever in and slide it to the left to lock. Unlock reverse lever by sliding it back to the right and letting it return to its normal position.



KEEPING SEAMS STRAIGHT

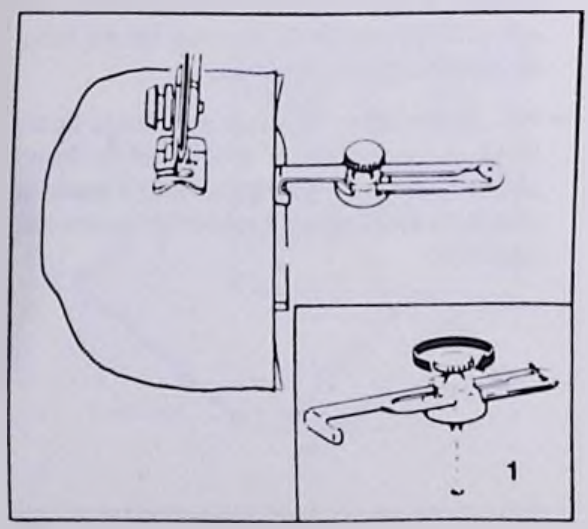
To keep seams straight, use one of the guidelines on the needle plate. The most commonly used line (1) is extended onto the slide plate. The crosslines (2) serve as guides when stitching square corners.



TURNING SQUARE CORNERS

To turn a square corner, use crosslines on slide plate.

- Line up fabric with extended guidelines on needle plate and stitch seam, slowing speed as you approach corner.
- When bottom of fabric reaches cornering crosslines (2) on slide plate, stop stitching.
- Be sure needle is down in fabric.
- Raise presser foot slightly. Turn fabric, bringing bottom edge in line with guideline (1).
- Continue stitching seam.

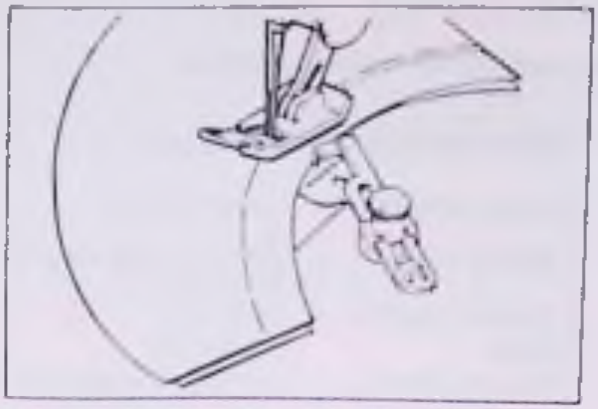


USING THE SEAM GUIDE (N)

(Not included with 10 pattern sewing machine. See page. 35)
For extra help in keeping seams straight, particularly for very narrow or very wide seams, use the seam guide which comes with your machine.

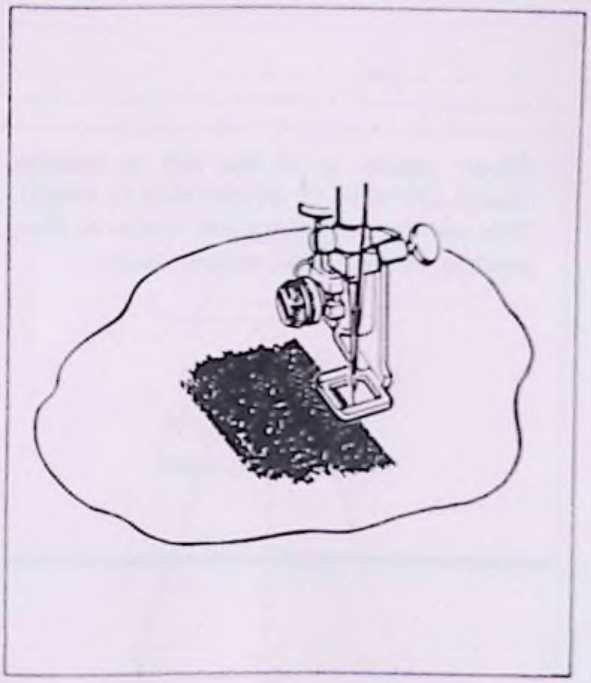
To attach the seam guide, place screw of seam guide into the hole in the bed of the machine, on the right side of slide plate (1).

Line up the straight edge of the guide with the needle plate guideline for desired seam width and tighten screw.



SEWING CURVED SEAMS

- Baste seam line.
- Use a short stitch for elasticity and strength.
- Guide fabric to follow curve.
- The seam guide may also be used when sewing curved seams. Attach seam guide at an angle so that the edge closer to the needle acts as a guide.



DARNING

(Not included on 10 stitch sewing machine. See page. 35)

Mend worn or torn areas using the Darning and Embroidery Foot.

- Trim ragged edges and baste a backing on wrong side of tear.

RECOMMENDED SETTINGS	
Stitch Selection:	Straight Stitch
Stitch Width:	0
Stitch Length:	0
Foot:	Darning and Embroidery (G)
Needle Plate:	General Purpose (A)

- Attach Feed Cover.
- Place area to be darned, right side up, under presser foot; lower foot.
- Stitch, guiding fabric back and forth, until entire area is filled in.

FREE MOTION EMBROIDERY

In free motion embroidery, you sew without a presser foot, and control the fabric with an embroidery hoop.

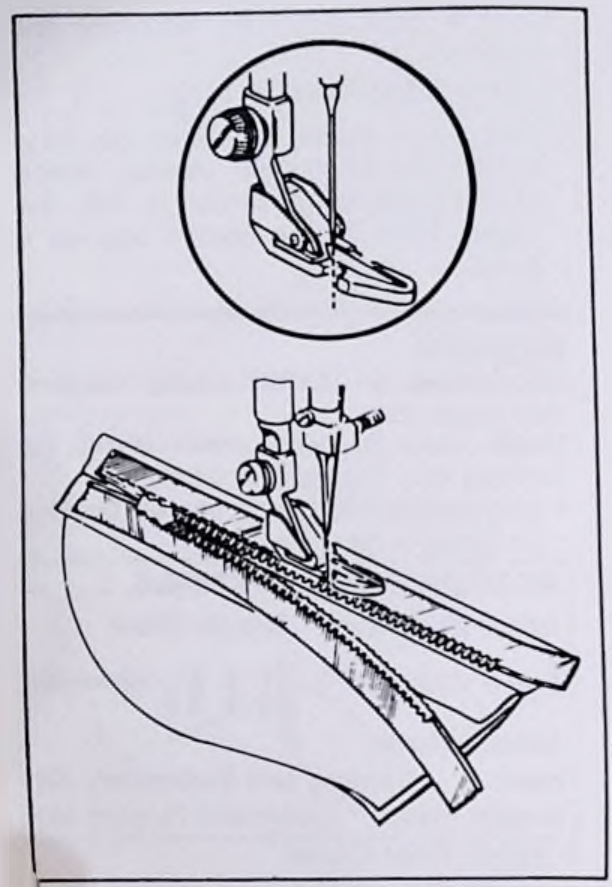
RECOMMENDED SETTINGS	
Stitch Selection:	Straight Stitch or Zig-Zag
Stitch Width:	0
Stitch Length:	0
Foot:	Remove foot with shank
Needle Plate:	General Purpose (A)

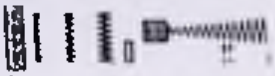
- Attach Feed Cover.
- Be sure to lower presser foot lifter.
- When embroidering, as shown, use straight stitches for stems, and zig-zag stitches, at varying widths, for leaves and petals. Lengthen stitches by moving the hoop faster or slower.

NOTE: The Darning and Embroidery Foot may be used to help control fabric.

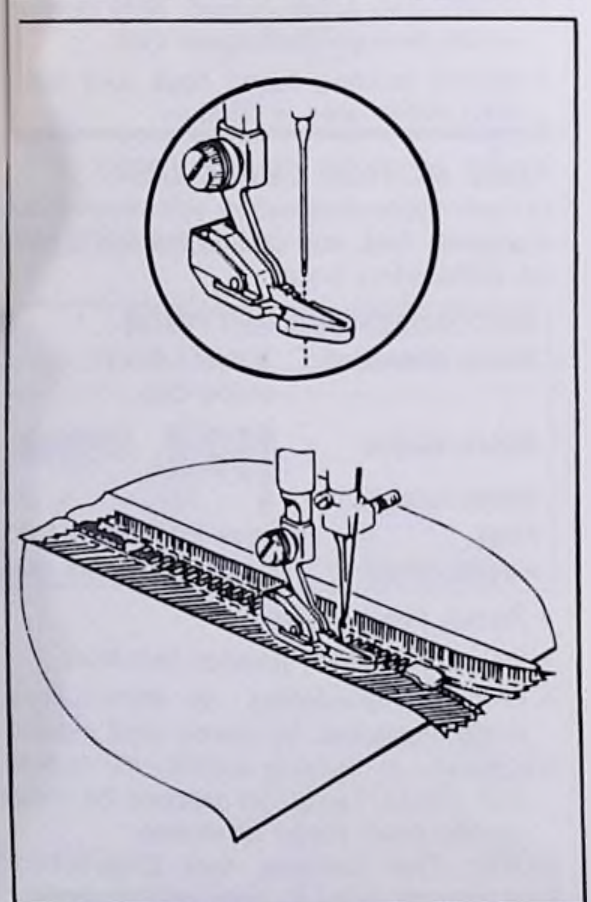
INSERTING A ZIPPER

The zipper package will provide complete instructions for inserting zippers.



RECOMMENDED SETTINGS	
Stitch Selection:	Straight Stitch
Stitch Width:	
Stitch Length:	1-1/2 to 4
Foot:	Zipper (E)
Needle Plate:	General Purpose (A)

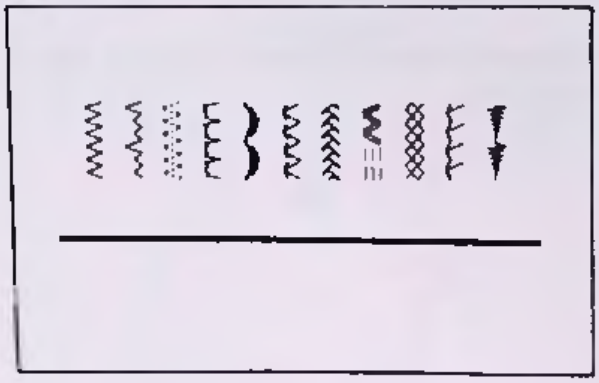
- When zipper is to the left of needle, attach left side of zipper foot to shank. The needle will enter left notch of foot, sewing close along zipper teeth.



- Attach right side of zipper foot to shank when a zipper is to the right side of the needle. The needle will enter right notch of foot, sewing close along zipper teeth.

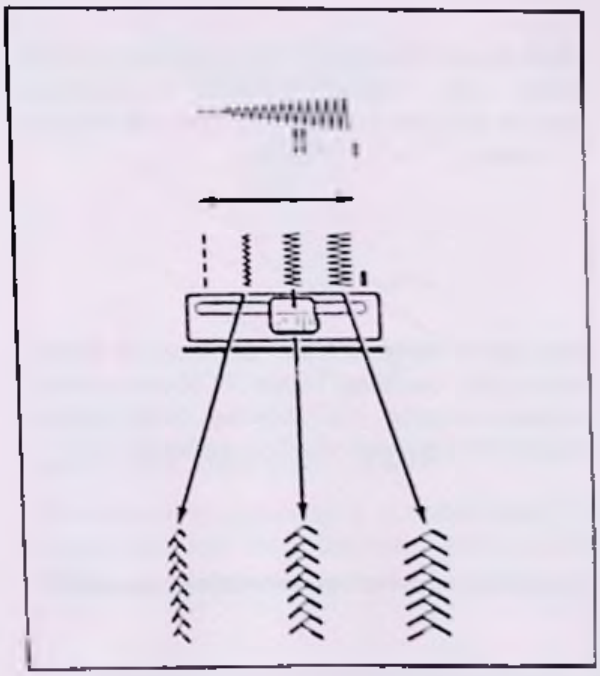
SECTION 4 SPECIAL STITCHES

The Special Stitches on your machine have a variety of practical and decorative uses. In this section are recommended applications for each stitch. However, these stitches can be used for many other sewing projects.



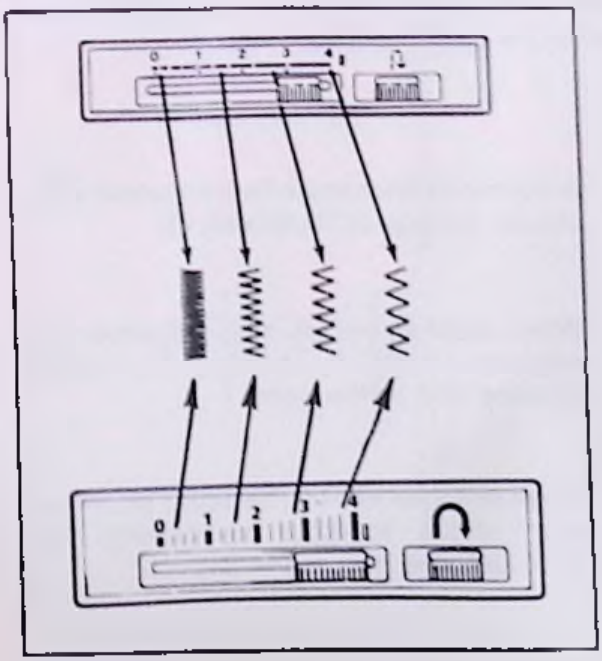
Before beginning a sewing project, check the Fabric, Thread and Needle Table on page 36 for the best needle and thread combination for your fabric.

With each application, recommended settings have been given. These have been highlighted for easy identification. You can adjust each setting, however, as desired.



ADJUSTING STITCH WIDTH

To widen or narrow a Special Stitch pattern, move the stitch width lever off Straight Stitch, [---] , toward any other width setting at the right.

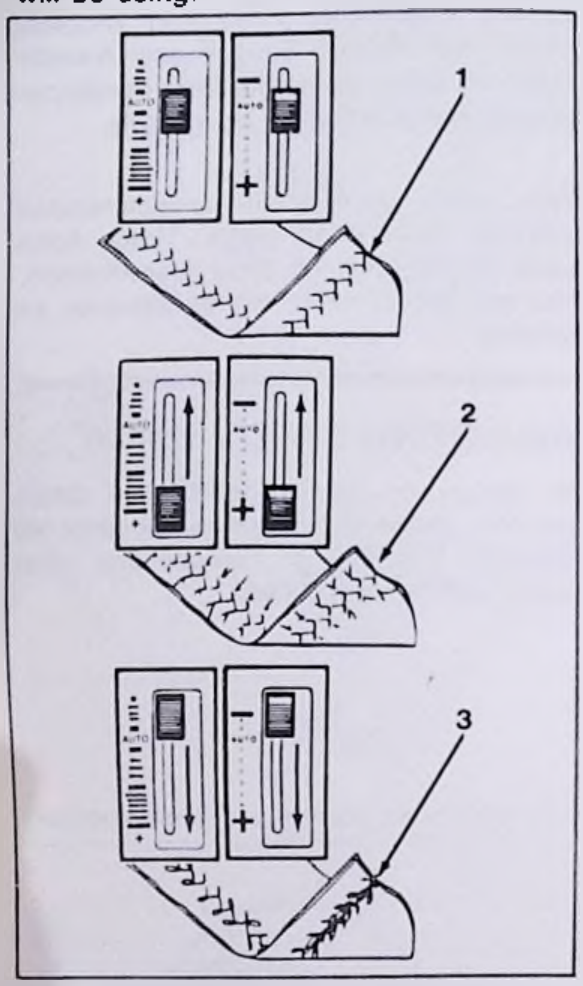


ADJUSTING STITCH LENGTH

The stitch length indicator is numbered **0** to **4**. The area between **0** and **1** will produce very dense stitching. For more open stitching, slide the stitch length lever anywhere from **2** to **4**. When sewing special color coded stitches. The length **MUST** be set in the **3-1/2** to **4** area.

ADJUSTING THREAD TENSION

Some Special Stitch patterns may require looser thread tension than others. To find the proper tension for your application, make a test sample with the thread and fabric you will be using.



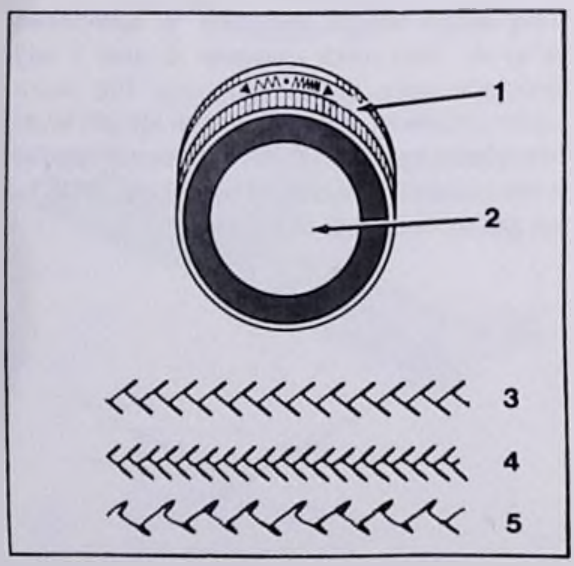
Proper tension produces a smooth, even stitch **(1)**.

Too much tension will produce a tight stitch **(2)**, causing fabric to pucker. Adjust tension by moving lever up toward a looser "–" setting.

Too little tension will produce a loose stitch **(3)**, causing loops in your pattern. Adjust tension by moving lever down toward a tighter "+" setting.

ADJUSTING STITCH BALANCE

You can adjust the appearance of special color coded stitch patterns on the display panel, by turning the stitch balance ring **(1)** behind the pattern selector dial **(2)**.



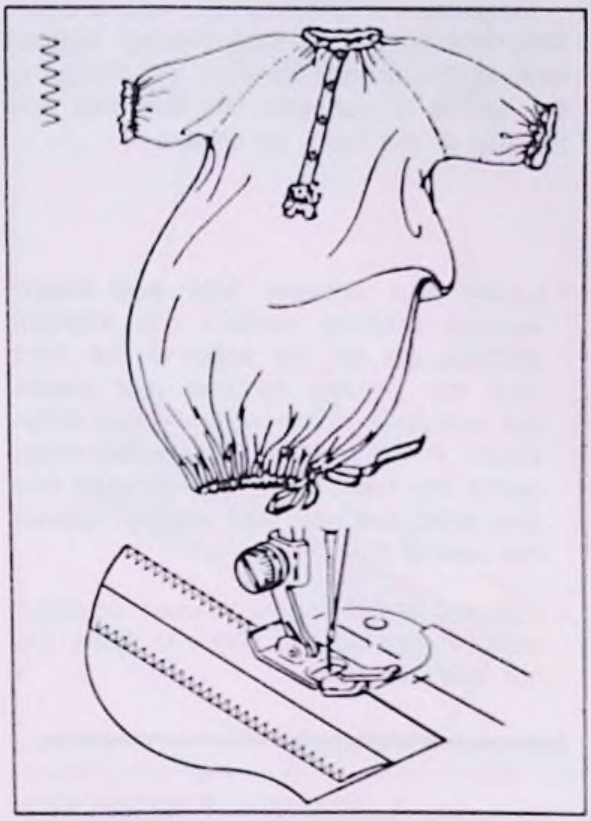
A correctly balanced Fagotingstitch #12, should appear as illustrated **(3)**.

When stitches are too close together (4), separate them by turning the stitch balance ring to the right.

When stitches are too far apart (5), bring them closer together by turning the stitch balance ring to the left.

ZIG-ZAG STITCH

The Zig-Zag Stitch can be used when sewing seams, appliquéing, monogramming or decorating.



SEAM FINISHING

Use a zig-zag stitch to finish seam edges of fabrics that are likely to unravel.

- Sew seams as desired; trim and press open.

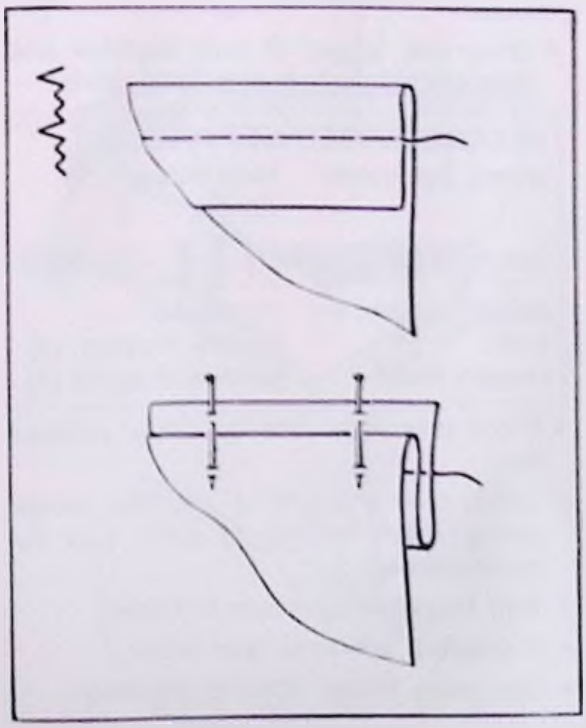
RECOMMENDED SETTINGS

Stitch Selection:	Zig-Zag Stitch
Stitch Width:	
Stitch Length:	1 to 4
Foot:	General Purpose **(B)**
Needle Plate:	General Purpose **(A)**

- Place edge of seam allowance under foot, as shown.
- Stitch close to edge, letting outer zig-zag fall over edge.

ZIG-ZAG BLINDSTITCH

Blindstitching provides a durable hem finish that can be used on a variety of different weight fabrics. Blindstitching takes a little practice, however, so make a test sample first.



Recommended Settings

Stitch Selection: Zig-Zag Blindstitch

Stitch Width:

Stitch Length: 2 to 4

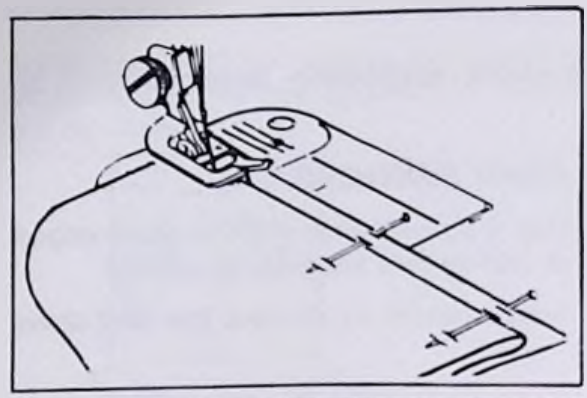
Foot: General Purpose **(B)**

Needle Plate: General Purpose **(A)**

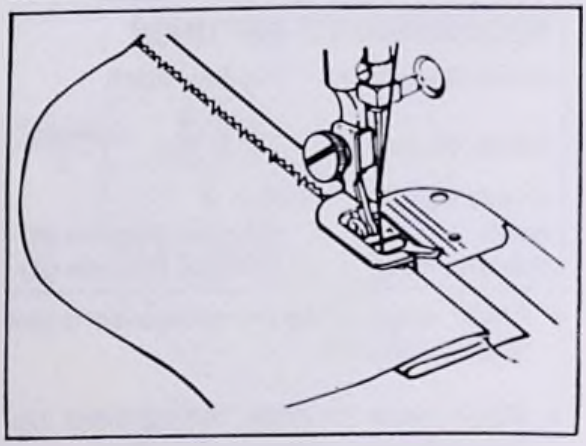
Attach blindstitch hem guide

Prepare the hem by folding it and pressing it in the usual way. You may want to baste the hem to hold it in place, as shown. If so, be sure to place the basting at least ½ inch (12mm) below the top edge of the hem allowance.

With the wrong side of fabric uppermost, turn the hem under, as shown, creating a soft fold from the top edge of hem. Pin or baste all three layers together in place.



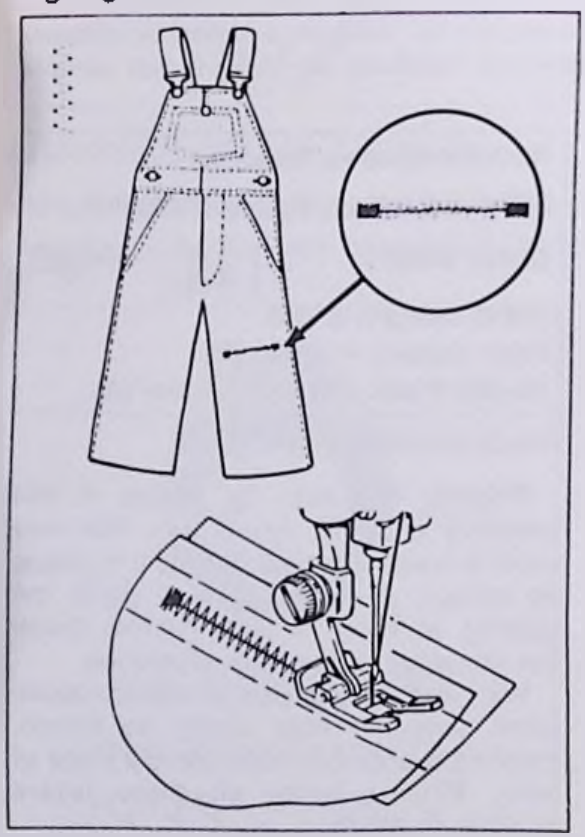
Position the hem under the presser foot with the soft fold resting against wall of the guide. Be sure the flange of the guide is between the soft fold and the top of the hem, as shown.



- Lower the presser foot and begin sewing making certain the straight stitches fall on the edge of the hem and the zig-zag stitches just pierce the soft fold of the work. Adjust stitch width if necessary. While stitching, guide the hem edge in a straight line and feed the soft fold evenly against the wall of the guide.
- If layers of fabric are pinned together, remove pins as you come to them. Do not sew over pins.

MULTI-STITCH ZIG-ZAG

Mending, overcasting, joining or reinforcing can all be done using the Multi-Stitch Zig-Zag.



MENDING A TEAR

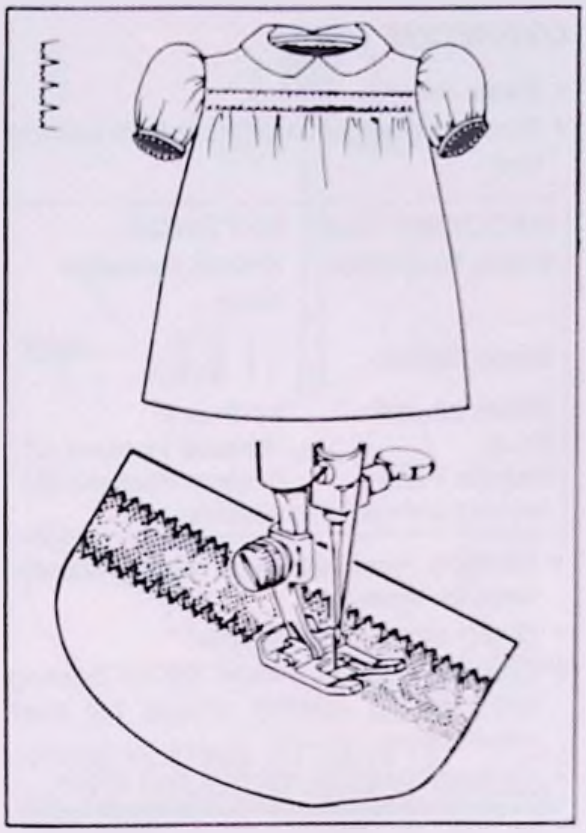
- Trim ragged edges of tear.
- Cut a lining of fabric for reinforcement.
- Bring the edges of tear together and baste lining to wrong side of fabric.

RECOMMENDED SETTINGS	
Stitch Selection:	Multi-Stitch Zig-Zag
Stitch Width:	
Stitch Length:	1 or lower
Foot:	Special Purpose (J)
Needle Plate:	General Purpose (A)

- Place tear, right side up, under presser foot.
- Stitch over the line of the tear, shortening stitch length at each end for reinforcement.
- Trim thread ends close to fabric.
- If needed, sew over tear again.
- Trim away lining close to stitching.

"M" STITCH

This stitch can be used for stretch seams and decorative stitching.



LACE TRIM

Lace trim may be added to blouses, lingerie and children's wear.

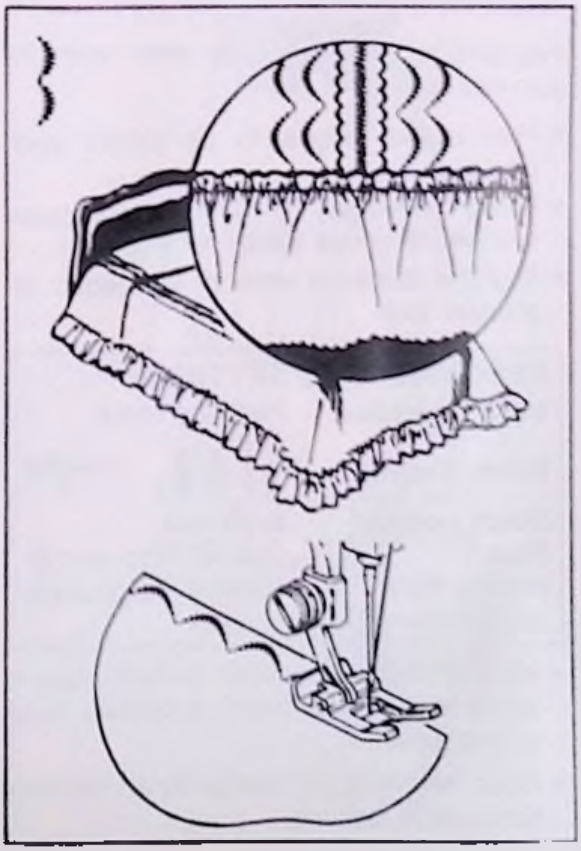
- Cut lace to desired size.
- Pin lace to right side of fabric where desired.

RECOMMENDED SETTINGS	
Stitch Selection:	"M" Stitch
Stitch Width:	
Stitch Length:	2 or lower
Foot:	Special Purpose (J)
Needle Plate:	General Purpose (A)

- Carefully stitch along both edges of lace, as shown.
- Trim away the fabric under the lace near stitching lines.

CRESCENT STITCH

This stitch is ideal for borders, edges, smocking and embroidering.



BORDER DESIGN

Border designs decorate clothing and many household items.

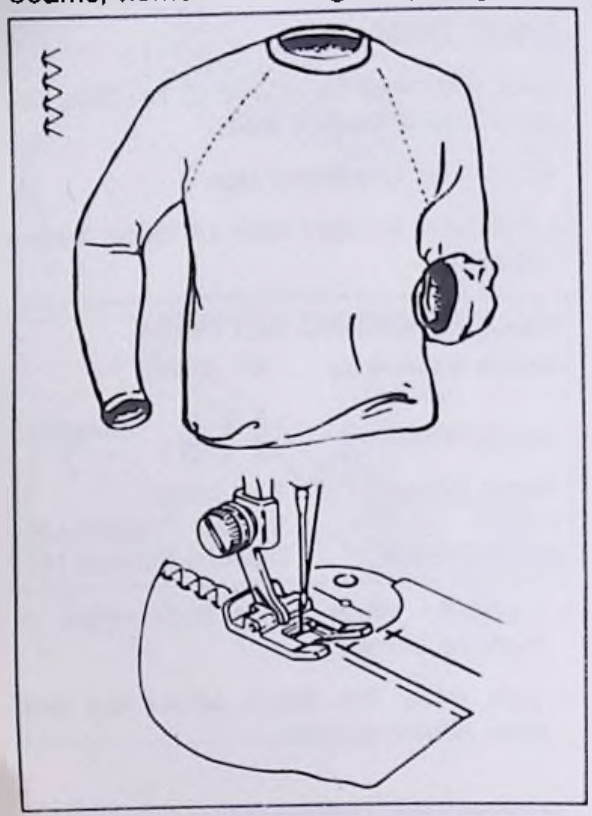
- Sew seams in usual manner and press.
- Mark stitching lines of fabric where desired.

RECOMMENDED SETTINGS	
Stitch Selection:	Crescent Stitch
Stitch Width:	
Stitch Length:	1 or lower
Foot:	Special Purpose (J)
Needle Plate:	General Purpose (A)

- Center marked line under presser foot and stitch.
- Pull threads to wrong side of fabric; tie and trim.

STRETCH OVEREDGE STITCH

With this stitch you can stitch and finish a seam in one step. It is also ideal for finishing seams, hems and facings requiring stretch.



OVEREDGE SEAM

- Baste seams.
- Trim seam edge 1/4" (6mm) from basting line.

RECOMMENDED SETTINGS

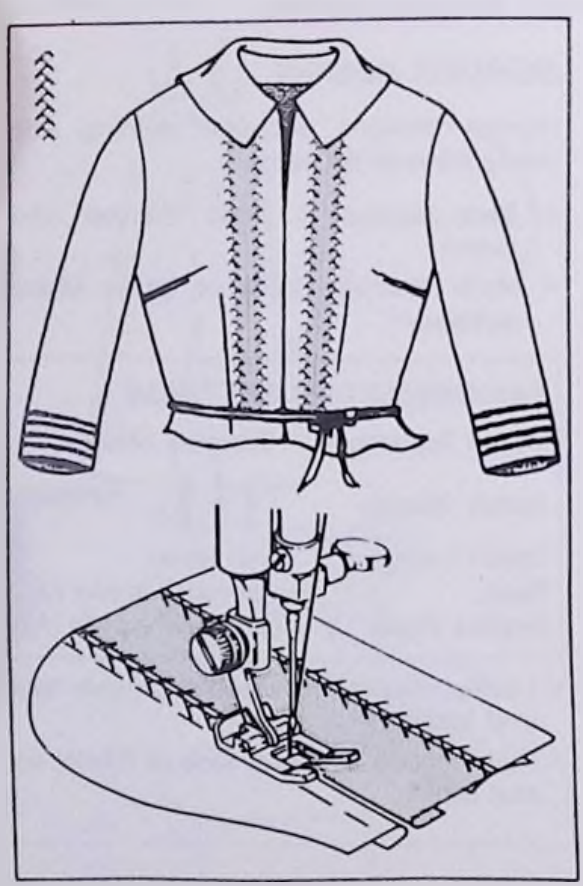
Stitch Selection:	Stretch Overedge Stitch
Stitch Width:	
Stitch Length:	3-1/2 to 4
Foot:	Special Purpose (J)
Needle Plate:	General Purpose (A)

Adjust balance, if necessary

- Position trimmed seam under presser foot, as shown.
- Stitch along basting line.
- Straight stitches should fall on basting line; zig-zag stitches should fall over seam edge.
- Remove basting stitches and press.

FAGOTING STITCH

Use this stitch for fagoting, embroidery, patchwork or strengthening seams.



FAGOTING

Fagoting is an open, lacy stitch used to join two pieces of fabric.

- Fold under edges to be joined and press.
- Baste the edges 1/8" (3mm) apart onto a sheet of tissue paper for support.
- Position center of work under center of presser foot.

RECOMMENDED SETTINGS

Stitch Selection:	Fagoting Stitch
Stitch Width:	
Stitch Length:	3-1/2 to 4
Foot:	Special Purpose (J)
Needle Plate:	General Purpose (A)

Adjust balance, if necessary

- As you sew, the needle should make a stitch first in one fabric strip, and then in the other.
- After stitching is completed, remove tissue and basting.

RIC-RAC ≤ /STRAIGHT STRETCH STITCH ≡

This is a heavy-duty, stretch stitch that can also be used for topstitching.

TOPSTITCHING

- Sew seams in usual manner and press.
- For topstitching hard-to-reach areas, convert machine to free arm sewing.

RECOMMENDED SETTINGS

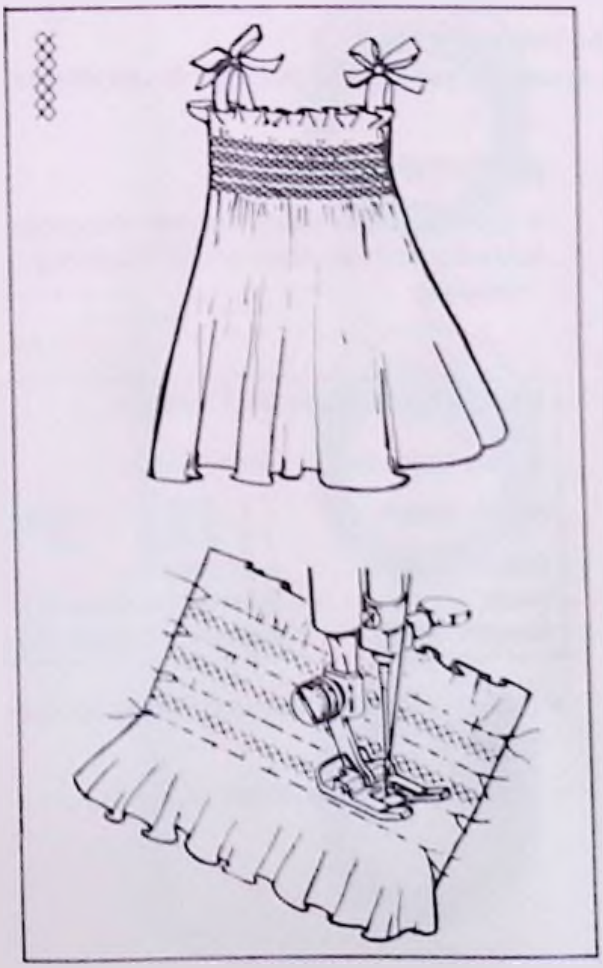
Stitch Selection:	Ric-Rac/Straight Stretch Stitch
Stitch Width:	
Stitch Length:	**3-1/2** to **4**
Foot:	Special Purpose **(J)**
Needle Plate:	General Purpose **(A)**

Adjust balance, if necessary

- Place garment right side up, under foot.
- Slowly topstitch desired areas.
- Pull threads to wrong side of fabric; tie and trim.
- To create a straight stretch stitch, **#14** set stitch width to the left and stitch length to **#4.**

HONEYCOMB STITCH (If your machine has this pattern)

Use the Honeycomb Stitch for smocking, mending and sewing stretch fabrics.



SMOCKING

Smocking is decorative stitching across evenly spaced gathers of fabric.

To Gather Fabric:

RECOMMENDED SETTINGS

Stitch Selection:	Straight Stitch
Stitch Width:	
Stitch Length:	**4**
Foot:	Special Purpose **(J)**
Needle Plate:	General Purpose **(A)**

- Sew rows of straight stitches, 1/4" apart, across area to be smocked.
- Pull thread evenly, gathering fabric.
- Tie ends of every two rows of stitching together to hold gathers in place.
- Baste a backing to wrong side of fabric.

To Smock Fabric:

RECOMMENDED SETTINGS

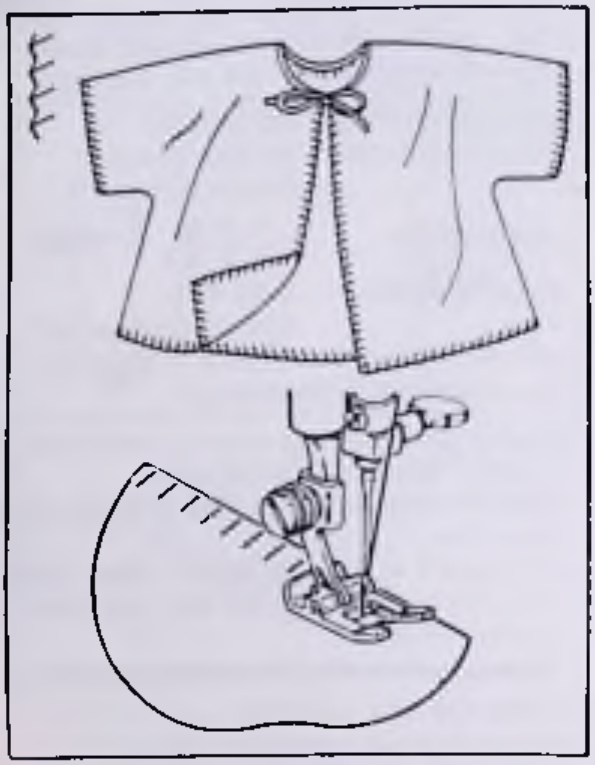
Stitch Selection:	Honeycomb Stitch
Stitch Width:	
Stitch Length:	**3-1/2** to **4**

Adjust balance, if necessary

- Sew between rows of straight stitches.
- Pull out straight stitches when completed.

SLANT OVEREDGE STITCH (If your machine has this pattern)

With the Slant Overedge Stitch you can stitch and finish a seam in one step. It is also ideal for edging and appliqueing.



EDGING

Add a delicate touch to your sewing while finishing and reinforcing your edges.

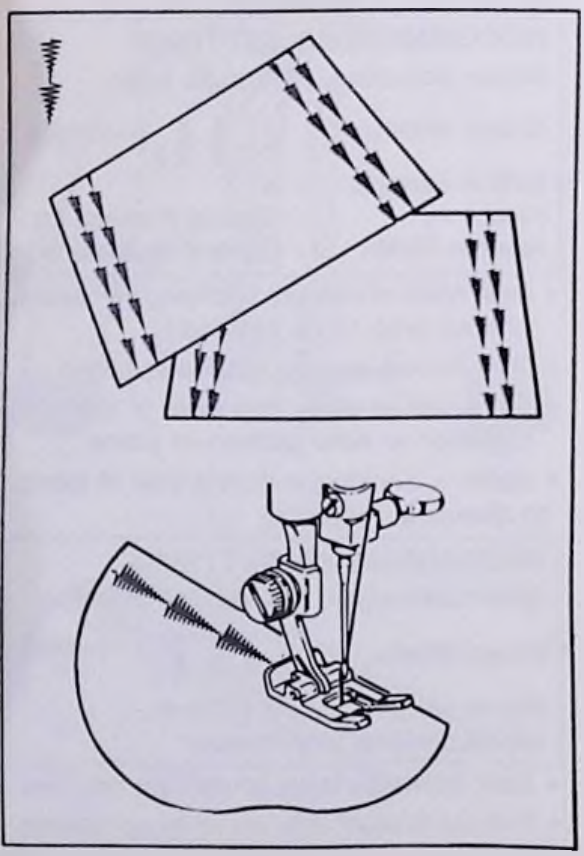
- Sew seams in usual manner and press.

RECOMMENDED SETTINGS	
Stitch Selection:	Slant Overedge Stitch
Stitch Width:	
Stitch Length:	**3-1/2 to 4**
Foot:	Special Purpose **(J)**
Needle Plate:	General Purpose **(A)**
Adjust balance, if necessary	

- Place edge of garment, right side up, under presser foot.
- Bulk of garment should be to the left.
- As you stitch, needle should go over right edge of fabric, as shown.

ARROW STITCH (If your machine has this pattern)

This stitch is a decorative and secure finish to seams, pleats and pockets. It can also be used as a border design.



BORDER DESIGN

- Sew seams in usual manner and press.
- Mark stitching lines on fabric where desired.

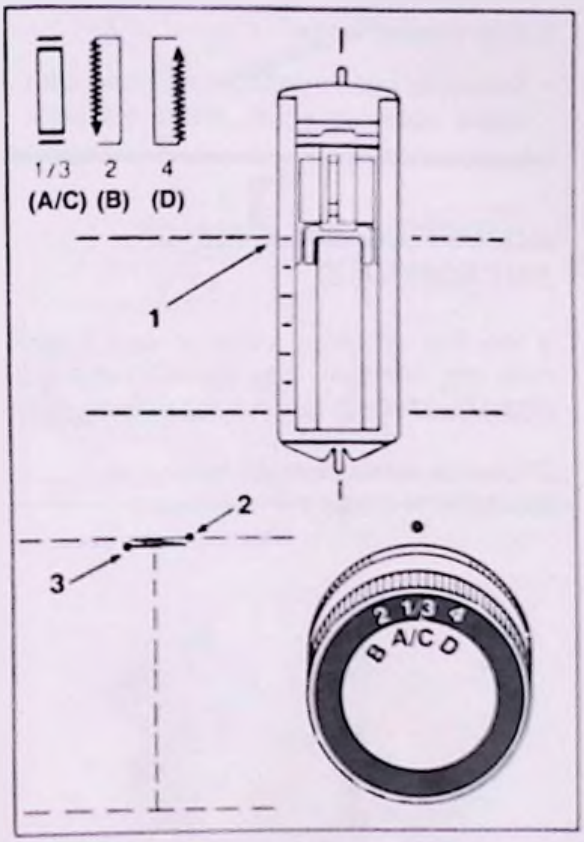
RECOMMENDED SETTINGS	
Stitch Selection;	Arrow Stitch
Stitch Width:	
Stitch Length:	1 or lower
Foot:	Special Purpose **(J)**
Needle Plate:	General Purpose **(A)**

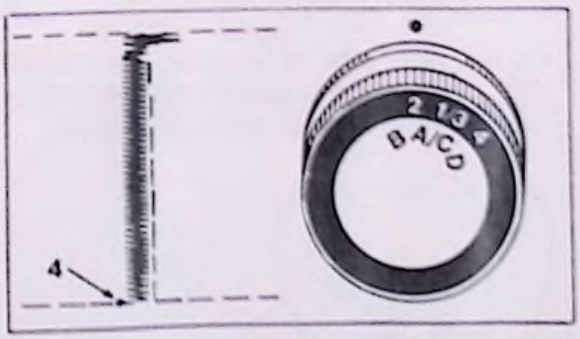
- Center stitching line under presser foot and sew.
- Trim thread ends close to fabric.

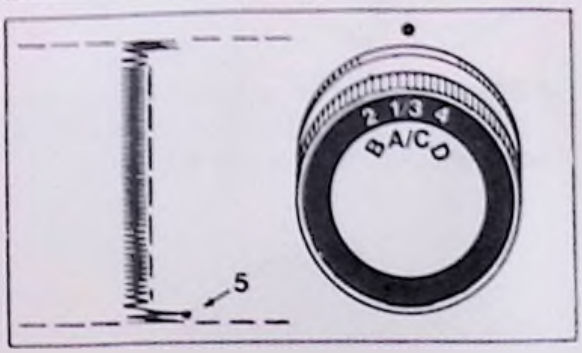
SECTION 5 FOUR-STEP BUTTONHOLING

Your machine makes buttonholes in four easy steps.

- You never need to move the fabric or reposition the needle.
- Always make a practice buttonhole on a sample of your fabric.
- Be sure bobbin contains enough thread.







- When making buttonholes on hard-to-reach areas convert machine bed to free arm sewing.
- Mark buttonhole position on fabric as indicated in pattern.
- When sewing delicate fabrics, place a piece of paper over the fabric when positioning the garment. Lower the presser foot and slip the paper out from under the foot. This will prevent the teeth on the underside of the foot from picking and pulling the fabric.

Recommended Settings

Stitch Selection:	Buttonhole Stitch
Stitch Width:	
Stitch Length:	4
Foot:	Buttonhole (L)
Needle Plate:	General Purpose (A)

Step 1

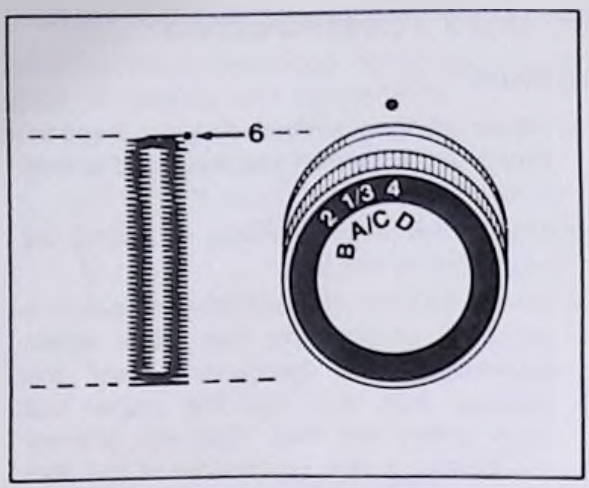
- Raise presser foot.
- Place fabric under foot.
- Center a red guideline (1) of foot around beginning line of buttonhole.
- Select Buttonhole Stitch #1/3. A/C
- Position needle in fabric at point (2).
- Lower the foot and make sure the sliding portion of the foot is all the way forward. Make 4 or5 stitches ending at point (3).
- Raise needle.

Step 2

- Select Buttonhole Stitch #2. B
- Stitch down to point (4).
- Raise needle.

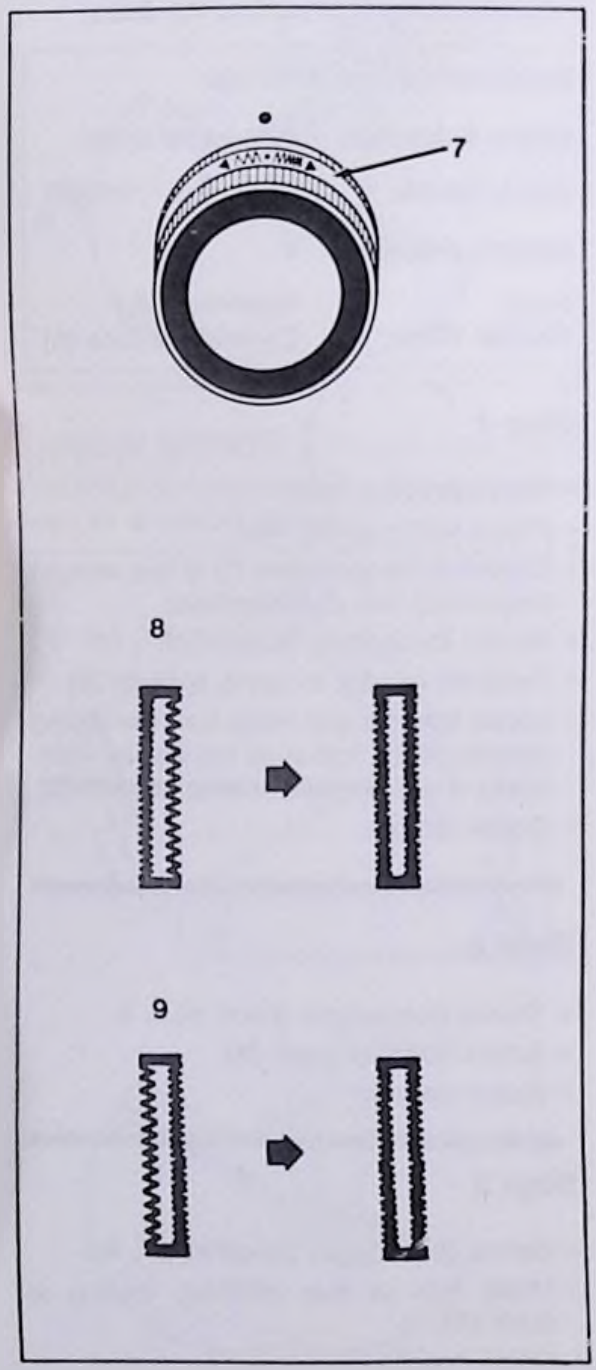
Step 3

- Select Buttonhole Stitch #1/3. A/C
- Make four or five stitches, ending at point (5).
- Raise needle.



Step 4

- Select Buttonhole Stitch #4 | (D)
- Stitch up to point **(6)**.
- Raise needle.
- Raise presser foot and remove garment from machine.
- Clip thread ends.
- Carefully cut buttonhole opening with a seam ripper or small, sharp scissors.



ADJUSTING BALANCE OF BUTTONHOLE

If the two stitching sides of your buttonhole are unequal, turn the stitch balance ring **(7)**, located behind the selector dial.

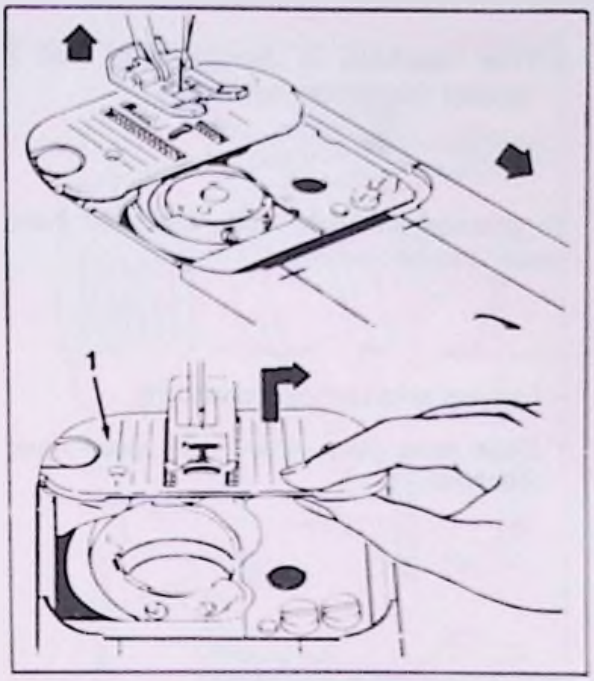
On some heavy weight fabrics an adjustment might be necessary.

- If the right side of stitching is too open **(8)**, turn stitch balance ring slightly to the right until both sides are equal.

- If the left side of stitching is too open **(9)**, turn stitch balance ring slightly to the left until both sides are equal.

SECTION 6 CARING FOR YOUR MACHINE

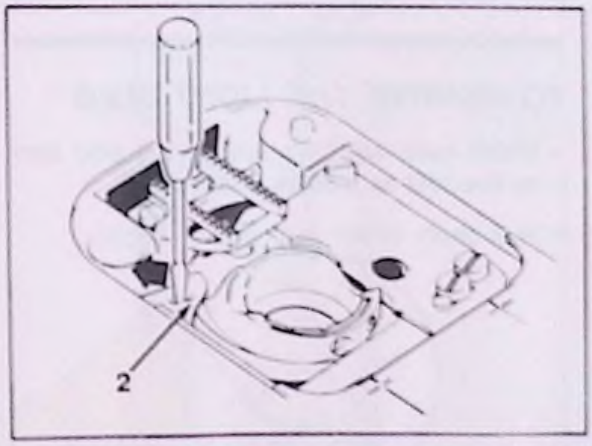
REMOVING AND REPLACING BOBBIN CASE



CAUTION: Before cleaning or adjusting the machine, remove plug from the socket outlet.

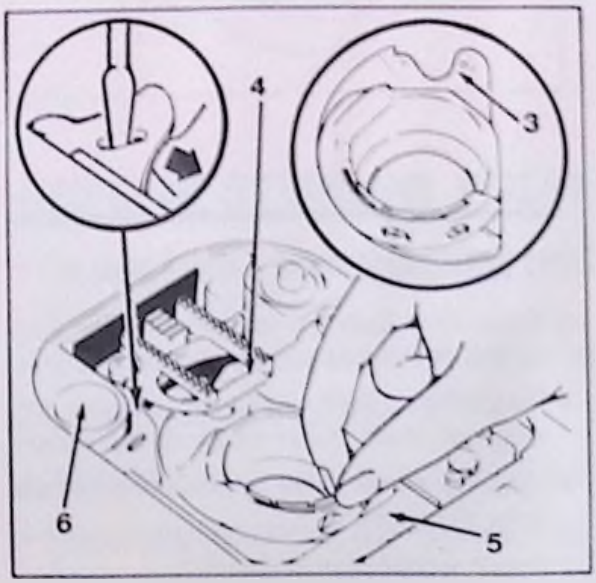
- Raise presser foot and needle.
- Open slide plate and remove bobbin.

- To remove the bobbin case, the needle plate must be removed first.
- Lift needle plate **(1)** from right corner and slide out from under foot.



TO REMOVE BOBBIN CASE

- With a small screwdriver, turn lever **(2)** back as far as it will go.
- Lift out bobbin case.



TO REPLACE THE BOBBIN CASE

- Guide forked end **(3)** of bobbin case under feed **(4)**
- Draw rim of bobbin case under position plate **(5)**.
- Turn lever **(2)** toward you, locking bobbin case in place.

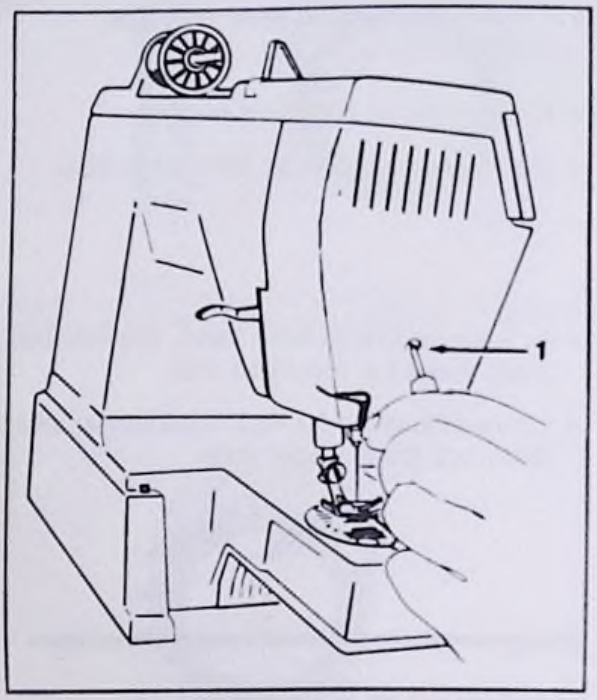
NOTE: After locking case in place, be sure it is **not tight**, but can **move slightly**.

- To replace needle plate, slide it under pin **(6)** and push it to the left.
- Press needle plate down in place.
- Insert bobbin and close slide plate

REMOVING AND REPLACING LIGHT BULB

CAUTION:

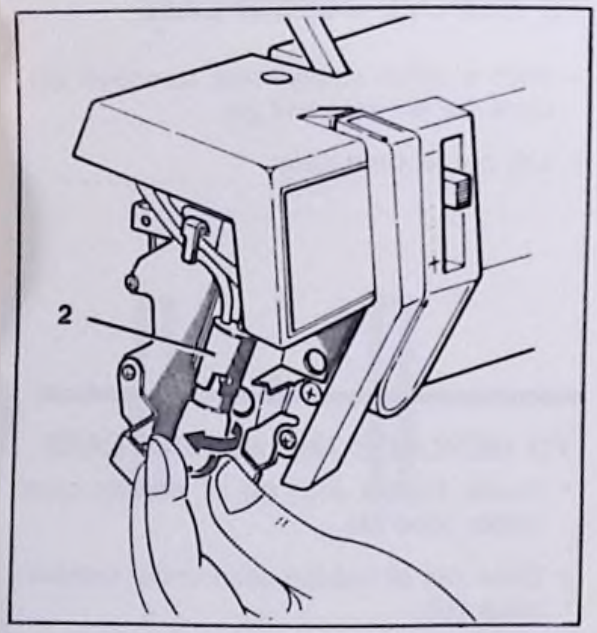
- Before changing light bulb, make sure you have removed plug from socket outlet. Be sure to replace the face plate which covers the light bulb before operating the machine.



- This machine is designed to use a 15-watt maximum light bulb.

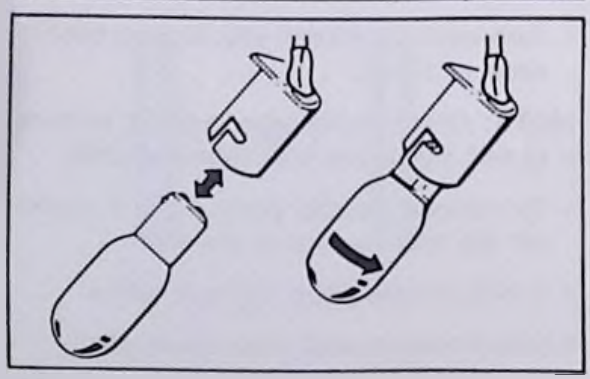
To change the light bulb, the face plate must first be removed.

- Loosen and remove screw (1).
- Slide face plate down and away from machine.



TO REMOVE THE LIGHT BULB

- Push bulb up into socket (2) and turn to the left to unlock bulb pins.
- Pull bulb down and out of socket.

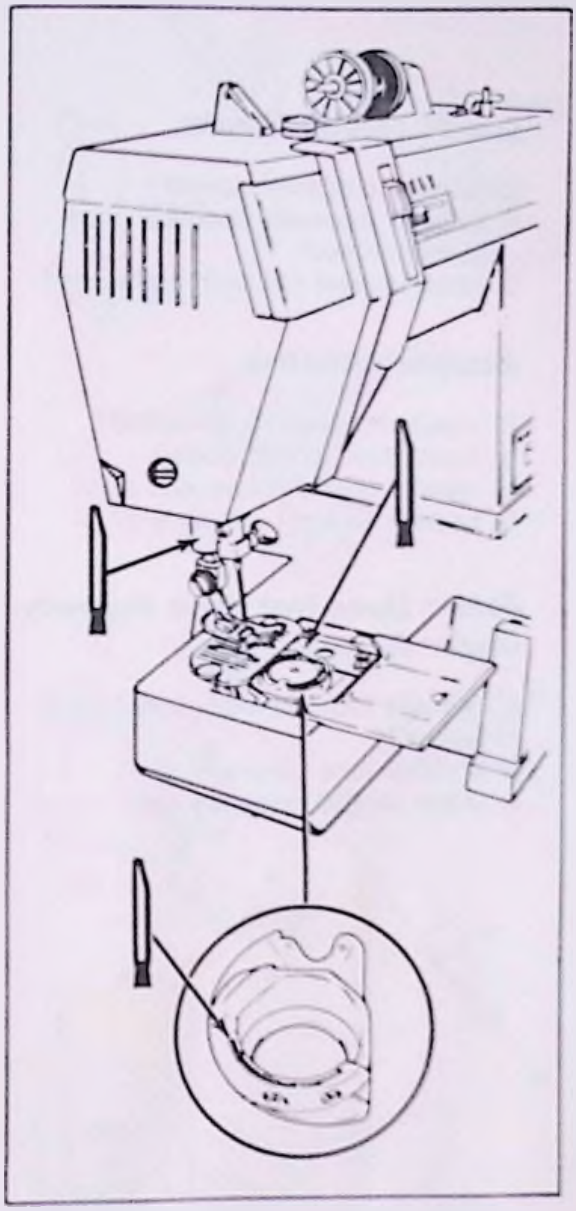


TO REPLACE THE LIGHT BULB

- Push new bulb up into socket and turn to the right until pins lock into position.
- Reposition face plate by sliding top edge of plate under edge of top cover.
- Line up screw hole in plate with screw hole in machine.
- Insert screw and tighten.

CLEANING THE MACHINE

Your machine is designed to give you many years of dependable service. To ensure this reliability, take a few minutes to keep the machine clean. How often you clean it depends on how often you use it.



- Using the lint brush, remove lint or dust from:

—presser bar

—needle bar

—bobbin case (if there is a lot of lint in this area, remove the bobbin case for cleaning)

—machine surface (if necessary, dampen a soft cloth and use a mild soap to clean the surface)

- Remove needle plate as instructed and clean exposed area with a lint brush.

BEFORE STORING YOUR MACHINE

- To disconnect, turn all controls to off ("0")position, then remove plug from outlet.
- Unplug foot controller from machine.
- Lower presser foot lifter.
- Turn handwheel to lower needle bar to the lowest position.
- Place your machine out of reach of children in safe, dry location.

PERFORMANCE CHECKLIST

When sewing difficulties occur, look back through this manual to make sure you are correctly following the instructions. If you still have a problem, the reminders below may help you to correct it.

Needle Does Not Move

Is machine connected to electrical supply?
Is the power and light switch on?
Is controller connected?
Is air supply from controller clear?

Needle Moves But Stitch Is Not Formed

Is needle defective?
Is needle fully inserted into needle clamp?
Are bobbin and needle correctly threaded?
Is bobbin correctly inserted into bobbin case?

Needle Breaks

Is needle straight and sharp?
Is needle correct size?
Is needle fully inserted into needle clamp?
Are controls properly set?
Are accessories correct for application?

Bobbin Winding Difficulties

Is thread unwinding freely from spool?
Is bobbin winder engaged?
Is thread end securely held at start of wind?

Upper Thread Breaks

Is machine properly threaded?
Is thread freely unwinding from spool?
Is proper spool cap being used?
Is needle correct size for thread?
Is upper thread tension too tight?
Is bobbin case properly inserted?
Is bobbin rim free of nicks?

Lower Thread Breaks

Is bobbin correctly wound?
Is bobbin correctly inserted in to bobbin case?
Is bobbin case correctly threaded?

Skipped Stitches

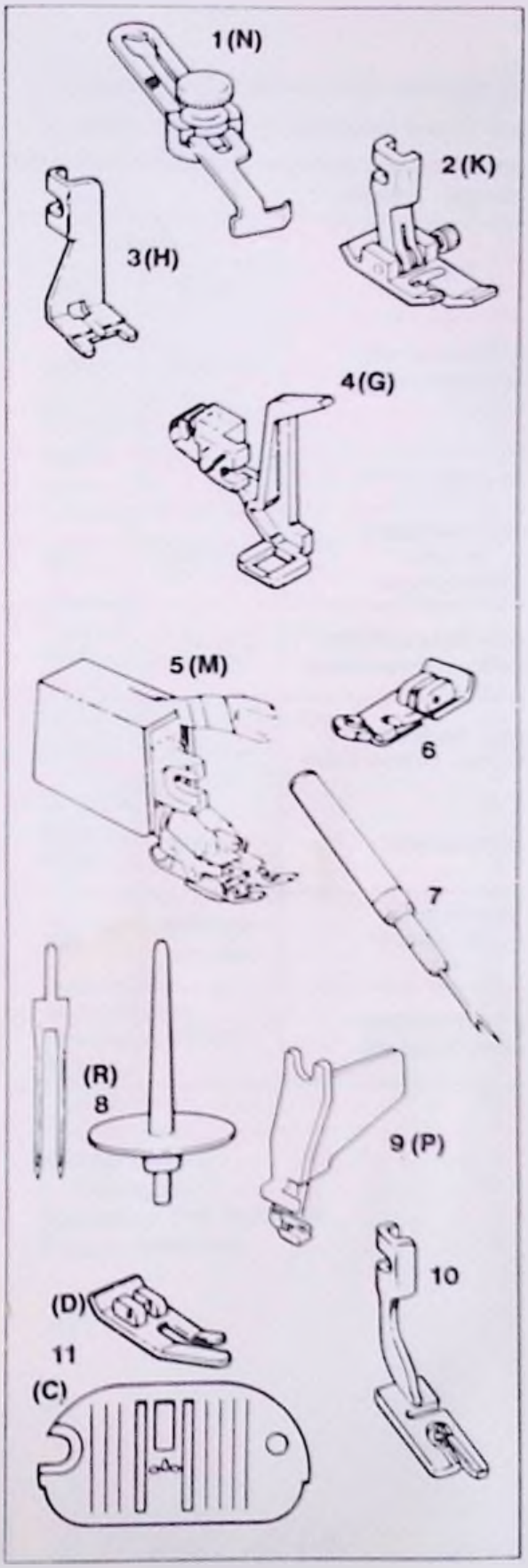
Is machine properly threaded?
Is fabric firmly held down?
Is needle correct style and size?
Is needle straight and sharp?

Fabric Does Not Move Properly Under Presser Foot

Is presser foot correctly attached to machine?
Is presser foot lowered?
Is stitch length correctly set?

ADDITIONAL ACCESSORIES

Additional Accessories for your sewing machine are available at your sewing center



1. **Seam Guide (N),** helps keep seam allowance even.

2. **Blindstitch Presser Foot (K)** helps guide fabric for nearly invisible blindstitch hems.

3. **Button Sewing Foot (H),** holds buttons securely for fastening.

4. **Darning and Embroidery Foot (G),** is recommended for free motion work, such as embroidery, monogramming and decorative designs.

5. **Even Feed Foot (M),** is used for sewing hard to feed pile, stretch and bonded fabrics. Also excellent for plaids, stripes and topstitching.

6. **Overedge Foot,** use with Overedge Stretch Stitch for seams in stretch fabrics.

7. **Seam Ripper,** used to pick and cut threads quickly and neatly.

8. **Twin Needle and Spool Pin (R),** are used for decorative twin needle (2 threads) stitching on woven and knit fabrics.

9. **Needle Threader (P),** assists in threading machine needle.

10. **Narrow Hemmer Foot** is used to stitch a narrow hem in a single operation.

11. **Straight Stitch Presser Foot (D),** and **Needle Plate (C),** are used when straight stitching light-weight fabrics.

Fabric, Thread and Needle Table

- The needle and thread used for a sewing project depends upon the fabric that is chosen.
- The table below is a practical guide to needle and thread selections for most situations.
- Refer to it before starting to sew. Be sure to use the same size and type of thread in both needle and bobbin. For best results, use only genuine Singer needles.

Fabric	Thread	Needles	
		Type	Size
Delicate - tulle, chiffon, fine lace, organza	Fine mercerized cotton Fine synthetic thread	Style 2020	9/70
Lightweight - batiste, organdy, jersey, voile, taffeta, crepe, chiffon velvet, plastic film	50 mercerized cotton - silk Fine synthetic thread	Style 2020	11/80
Medium Weight - gingham, percale, pique, linen, chintz, faille, satin, fine corduroy, velvet, suitings, knits, deep-pile fabrics, vinyl	50 mercerized cotton - 60 cotton Synthetic thread	Style 2020	14/90
Medium Heavy - gabardine, tweed, sailcloth, denim, coatings, drapery, vinyl, deep-pile fabrics	Heavy-duty mercerized cotton 40 to 60 cotton - Synthetic thread	Style 2020	16/100
Heavy - overcoatings, dungaree, upholstery fabrics, canvas	Heavy-duty mercerized cotton 24 to 40 cotton - Synthetic thread	Style 2020	18/100
All Weights - decorative topstitching	Buttonhole twist**	Style 2020	16/100 18/100
Synthetic Knits and Stretch Fabrics - polyester doubleknit, nylon tricot, jersey, cire, panne velvet, bonded fabrics, raschel	Synthetic thread - 50 mercerized cotton - Silk	Style 2045 Ball Point	14/90
Leather - suede, kidskin, lined leathers	50 mercerized cotton Synthetic thread - Silk	Style 2032	11/80 14/90 16/100

** Use with standard sewing thread in bobbin

INDEX

Accessories 4,35
Balance 22,30
Basting 17
Blindstich Hem 23,24
Bobbin 4
  Winding A 12
  Inserting A 13
Bobbin Case 31
  Removing 31
  Cleaning 33
Bobbin Thread, Raising 14
Border Design 25,28
Buttonhole Presser Foot 4,29
Buttonholing, Four Step 29
Caring For Your Machine 31,32,33
Cleaning Your Machine 33
Connecting The Machine 7
Corners, Turning Square 18
Darning 19
Darning and Embroidery Foot 4,19
  Attaching Foot 10
Edging 28
Embroidery, Free Motion 19
Fabrics 36
  Placing Under Foot 17
Face Plate 32
Fagoting 26
Feed Cover 4
  Attaching Feed Cover 10
Free-Arm Sewing 3,27,29
Lace Trim 25
Light Bulb 32
  Replacing 32
Lint Brush 4,33
Needles 4
  Selecting 36
  Changing 8
Needle Plate 4
  Changing 31
Operating The Machine 7
Pattern Selecting 15
Performance Checklist 34
Presser Feet 4
  Changing 9,10
  General Purpose 4
  Special Purpose 4
Presser Foot Lifter 17
Presser Foot With Shank 4
  Changing 10
Principal Parts 2,3
Reverse Stitching 17
Seams:
  Curved 19
  Finishes 17,18,19,23,26
  Keeping Straight 18
  Overedge Seam 26
  Sewing A Seam 17
Seam Guide 4,18,19
Smocking 27
Special Stitches 21
Spool Caps 4,11
Stitch Patterns
  Arrow Stitch 28
  Blindstitch Zig-Zag 23,24
  Crescent Stitch 25
  Fagoting Stitch 26
  Honeycomb Stitch 27
  Multi-Stitch Zig-Zag 24
  Ric-Rac/Straight Stretch Stitch 27
  Slant Overedge Stitch 28
  Straight Stitch 15
  Stretch Overedge Stitch 26
  Zig-Zag Stitch 23
Stitch Length 15,21
Stitch Width 21
Tears, Mending 24
Tension 16,22
Thread 36
Threading The Machine 11
Top Stitching 27
Zipper Foot 4,20
Zipper, Inserting A 20

E-MAIL ADD - TalkToUS@SingerCo.Com

Singer Model 648

Part No. 317199-001 (R:05)

ENG